State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 101 S. Webster Street Box 7921 Madison WI 53707-7921

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



October 28, 2016

Chevron Environmental Management Co – Responsible Party Chevron Facility # 306390 Project Manager John R. Frary 4800 Fournace Place E540B Bellaire, TX 77401

Burlington Northern Santa Fe Railway Company – Property and Railroad ROW Owner Julie A. Heyen, Portfolio Manager, JLL on behalf of BNSF 4105 Lexington Avenue N Suite 200 Arden Hills, MN 55126

### **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

SUBJECT: Final Case Closure with Continuing Obligations Unocal Superior Terminal (Former), 2301 Winter St, Superior, WI DNR BRRTS Activity #: 03-16-000145 PECFA # 54880-1425-01- A & B FID#: 156381

Dear Mr. Frary and Ms. Heyen:

The Department of Natural Resources (DNR) considers the Unocal Superior Terminal (Former) site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter to anyone who purchases, rents or leases this property from you. Certain continuing obligations also apply to affected property owners or rights-of-way holders. These are identified within each continuing obligation.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The Wisconsin Department of Safety and Professional Services (DSPS) project manager reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. A conditional closure letter was issued by the Department of Safety and Professional Services (DSPS) on June 27, 2013. The DNR Northern Region (NOR) Closure Committee reviewed the case for final closure on May 8, 2014 and requested for clarification about the land parcel ownership and property tax record issues for both Lessee and landowner Chevron and Lessor/Owner Burlington Northern Santa Fe Railroad Co. (BNSF). Documentation on updated property ownership records was received on April 25, 2016.

The 24.5-acre site consists of five parcels of land and the Railroad ROWs. The remedial responses included soil excavation and disposal at a landfill, soil treatment using biocells, phytoremediation, groundwater monitoring, and remediation by natural attenuation (RNA) for both impacted soil and groundwater. The conditions of closure and continuing obligations required were based on the property being used for industrial purposes in the future.

### **Continuing Obligations**

The continuing obligations for this site are summarized below. Further details on actions required are found in the section <u>Closure Conditions</u>.

• Groundwater contamination is present at or above ch. NR 140 enforcement standards.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- If a structural impediment that obstructed a complete site investigation and/or cleanup is removed or modified, additional environmental work must be completed.
- Industrial soil standards were applied for closure, and industrial zoning is required. Before the land use may be changed from industrial to non-industrial, additional environmental work must be completed.
- Remaining contamination could result in vapor intrusion if future construction activities occur. Future construction includes expansion or partial removal of current buildings as well as construction of new buildings. Vapor control technologies will be required for occupied buildings, unless the property owner assesses the potential for vapor intrusion, and the DNR agrees that vapor control technologies are not needed.

The DNR fact sheet "Continuing Obligations for Environmental Protection," RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet is attached and may also be obtained at <u>http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf</u>.

# **GIS Registry**

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <u>http://dnr.wi.gov/topic/Brownfields/rrsm.html</u>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at http://dnr.wi.gov/topic/wells/documents/3300254.pdf.

All site information is also on file at the Northern Regional DNR office, at the Rhinelander Regional Office, 107 Sutliff Avenue, Rhinelander, WI 54501. This letter and information that was submitted with your closure request application, including any maps, can be found as a PDF in BRRTS on the Web.

# **Closure Conditions**

Compliance with the requirements of this letter is a responsibility to which Chevron Environmental Management Co. and Burlington Northern Santa Fe Railroad Company (BNSF), and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not follo0wed, the DNR may take enforcement action under s. 292.11, Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources Attn: Remediation and Redevelopment Program Environmental Program Associate Kathleen Shafel 107 Sutliff Avenue Rhinelander, WI 54501

Residual Groundwater Contamination (chs. NR 140 and 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present both on this contaminated property and off this contaminated with petroleum products property, as shown on the **attached Figure B3b Groundwater Contour Map (July 2012) prepared Gannet Fleming**. If you intend to construct a new well, or reconstruct an existing well, you'll need prior DNR approval. Affected property owners were notified of the presence of groundwater contamination. This continuing obligation also applies to the Burlington Northern Santa Fe Railroad Co., both as the owner of the property and also as the ROW holder of the railroad lines on this property near the street address of 2301 Winter Street in Superior, WI.

<u>Residual Soil Contamination (ch. NR 718, or ch. 289, Stats.; chs. 500 to 536, Wis. Adm. Code</u>) Soil contamination by petroleum products remains on the property as indicated on **Figure B2b Excavation Areas and Residual Contamination** prepared by AECOM on April 25, 2016. If soil in the specific locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. This continuing obligation also applies to the Burlington Northern Santa Fe Railroad Co., both as the owner of the and also as the ROW holder of the railroad on this property near the street address of 2301 Winter Street in Superior, WI.

In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

<u>Structural Impediments</u> (s. 292.12 (2) (b), Wis. Stats., s. NR 726.15, s. NR 727.07, Wis. Adm. Code) On the 4.3-acre property Parcel ID: 04-804-01036-00, owned by Burlington Northern, Inc, a large structural impediment of the concrete secondary containment for the removed onsite ASTs (a separate former fuel delivery system altogether) is present. The structural impediment encompasses most of the 4.3-Acre parcel and it is still inplace. It is submerged under an unknown depth of water, and fenced in. This made complete investigation and/or remediation of the soil contamination on this property impracticable. If the structural impediment is to be removed, the property owner shall notify the DNR at least 45 days before removal, and conduct an investigation of the degree and extent of petroleum, etc. contamination below the structural impediment. If contamination is found at that time, the contamination shall be properly remediated in accordance with applicable statutes and rules.

# Industrial Soil Standards (s. NR 726.15, s. NR 727.07, Wis. Adm. Code)

Soil contamination remains in Area 1 located on the southwest portion of the property highlighted in orange, as shown on Figure B2b Excavation Areas and Residual Contamination. Samples contained Benzo(a)pyrene, Benzo(a)anthracene, and Naphthalene in concentrations that met the site-specific industrial soil standards developed for this site.

This property may not be used or developed for a residential, commercial, agricultural or other non-industrial use, unless prior written approval has been obtained from the DNR. The property owner shall notify the DNR at least 45 days before changing the use. An investigation and remedial action to meet applicable soil cleanup standards may be required at that time. This continuing obligation also applies to the Burlington Northern Santa Fe Railroad Company, who is the property owner and the ROW holder for the ROWs on the 2301 Winter Street property.

<u>Vapor Mitigation or Evaluation</u> (s. 292.12 (2), Wis. Stats., s. NR 726.15, s. NR 727.07, Wis. Adm. Code) Vapor intrusion is the movement of vapors coming from volatile chemicals in the soil or groundwater, into buildings where people may breathe air contaminated by the vapors. Vapor mitigation systems are used to interrupt the pathway, thereby reducing or preventing vapors from moving into the building.

Future Concern: Petroleum contamination remain in soil in Area 1, as shown on Figure B2b Excavation Areas and Residual Contamination, at levels that may be of concern for vapor intrusion in the future, depending on construction and occupancy of a building. Therefore, before a building is constructed and/or an existing building is modified, the property owner must notify the DNR at least 45 days before the change. Vapor control technologies are required for construction of occupied buildings unless the property owner assesses the vapor pathway and DNR agrees that vapor control technologies are not needed. This continuing obligation also applies to the Burlington Northern Santa Fe Railroad Company, who is the property owner and the ROW holder for the ROWs on the 2301 Winter Street property.

## Other Closure Information

## General Wastewater Permits for Construction Related Dewatering Activities

The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction related dewatering activities, including utility and building construction.

If you or any other person plan to conduct such activities, you or that person must contact that program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at <u>dnr.wi.gov/topic/wastewater/GeneralPermits.html</u>. If residual soil or groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for Discharge of Contaminated Groundwater from Remedial Action Operations may be needed. If water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids and oil and grease, a general permit for Pit/Trench Dewatering may be needed.

### In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Ralph Smith at (608) 261-6543, or at Ralph.Smith@wisconsin.gov.

Singerer lehan John Robinson

Northern Region Team Supervisor Remediation & Redevelopment Program

# Attachments:

Figure B3b Groundwater Contour Map (July 2012) prepared Gannet Fleming Figure B2b Excavation Areas and Residual Contamination, prepared by AECOM dated April 25, 2016 RR 819 Continuing Obligations for Environmental Protection

cc: Andrew Tarara, AECOM, 800 LaSalle Avenue, Suite 110, Minneapolis, MN 55402
Amanda Lannon, AECOM, 800 LaSalle Avenue, Suite 110, Minneapolis, MN 55402
Greg Jeffries – Burlington Northern Santa Fe Railway Company, 80 44<sup>th</sup> Avenue NE, Minneapolis, MN 55421
BNSF Railway, Mr. James Cunningham, BNSF Environmental Manager for Leases, 601 W O Street, Lincoln, NE 68528
Burlington Northern, Inc., PO Box 961089, 2600 Lou Menk Drive, Fort Worth, TX 76161
Ralph Smith, DNR Madison RR/5





Chevron Facility #306390 Former Unocal Terminal Superior, Wisconsin Project No.: 60301315

Excavation Areas and Residual Contamination

AECOM Figure B2b





\* ALL MONITORING WELLS HAVE BEEN ABANDONED

Gannett Fleming

FIGURE B3bcd

NOTE 1. GROUNDWATER ELEVATIONS MEASURED ON JULY 10, 2012.

GROUNDWATER <u>CONTOUR MAP</u> (JULY 2012) CHEVRON FACILITY #306390 FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN



**STATE OF WISCONSIN** 

Department of Safety and Professional Services

P.O. Box 8044 Madison, Wisconsin 53708-8044

**Governor Scott Walker** 

**Secretary Dave Ross** 

Email: dsps@wisconsin.gov Web: http://dsps.wi.gov

June 27, 2013

Chevron Environmental Management Company John Frary 4800 Fournace Place, Room E540B Bellaire, TX 77401

RE: Conditional Case Closure

**PECFA # 54880-1425-01-A North** DNR BRRTS # 03-16-000145 **PECFA # 54880-1425-01-B South** DNR BRRTS # 02-16-000336

# **Former Unocal Superior Terminal (Chevron Facility # 306390 - Lessee)** 2301 Winter Street, Superior

Dear Mr. Frary

The Wisconsin Department of Safety and Professional Services (DSPS) has reviewed the request for case closure prepared by your consultant, Gannett Fleming, Inc. for the site referenced above. It is understood that residual soil and groundwater petroleum contamination remains on site. DSPS has determined that this site does not pose a significant threat to human health or the environment. <u>No further investigation or remedial action is necessary</u>.

# The following conditions must be satisfied to obtain final closure:

• Please properly abandon all monitoring wells within 60 days per NR 141.25 and send the appropriate documentation to the letterhead address within 120 days of the date of this letter.

Information submitted with your closure request will be included on the Department of Natural Resources (DNR) GIS Registry of Closed Remediation Sites. All sites on the Registry can be viewed via the Remediation and Redevelopment (RR) Sites Map at <u>http://dnr.wi.gov/topic/Brownfields/rrsm.html</u>. Because residual contamination remains at the time of case closure, if you intend to construct or reconstruct a potable well on this property, you must get prior DNR approval.

All current and future owners and occupants of the property need to be aware that excavation of contaminated soil may pose a hazard. Special precautions may be needed to prevent inhalation, ingestion or dermal contact with the residual contamination when it is removed. If soil is excavated, the property owner at the time of excavation must have the soil sampled and analyzed to determine if residual contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation must determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. Costs for sampling and excavation activities conducted after the date of this letter are not eligible for PECFA reimbursement.

Depending on site-specific conditions, construction over contaminated materials may result in vapor migration into enclosed structures or along newly placed underground utility lines. The potential for vapor inhalation and migration should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (608) 261-6543.

Sincerely,

Ralph N. Smith Hydrogeologist PECFA Site Review Section

cc: Jeff King – Gannett Fleming, Inc.

Dave Olig - Gannett Fleming, Inc.

Julie Heyen – Jones Lang LaSalle Americas, Inc. 4105 Lexington Avenue North/Suite 200, Arden Hills, MN 55126

LeeAnn Thomas – Canadian Pacific, 120 South 6<sup>th</sup> Street, Suite 900, Minneapolis, MN 55402 Lee Hammond-Union Pacific Railroad,1400 Douglas Street, STOP 1030,Omaha, NE 68179-1030 Greg Jeffries – Burlington Northern Santa Fe Railway Company, 80 44<sup>th</sup> Avenue NE, Minneapolis, MN 55421

Andrew Tarara – AECOM, 332 Minnesota Street, Suite E1000, St. Paul, MN 55101 Kris Foley – WPDES General Permit Coordinator DNR Northern Region

Joel Garretson - Union Oil Company of California, 2210 W. Pine River Rd, Breckenridge, MI 48615

Case File

# SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

**Notice:** Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information		
BRRTS No.	VPLE No.	
03-16-000145		
Parcel ID No.		
48040103500,48040103300,48040097700		
FID No.	WTM Coordinates	
916010600	X Y	(07297
BRRTS Activity (Site) Name	338811	69/38/
		l O antan
Chocal Superior Terminal	Source Area Area Parce	
Sile Address		State ZIP Code
2301 Winter Street	Superior	WI 54880
Acres Ready For Use 24	4.5	
Responsible Party (RP) Name		
Contact Name: John Frary		
Company Name		
Chevron Environmental Management Company	· · · · · · · · · · · · · · · · · · ·	
Mailing Address	City	State ZIP Code
4800 Fournace Place, Room E540B	Bellaire	TX 77401
Phone Number	Email	
(713) 432-2645	jfrary@chevron.com	
Check here if the RP is the owner of the source property.		
Environmental Consultant Name		
Andrew Tarara		
Consulting Firm		
AECOM	1	
Mailing Address	City	State ZIP Code
800 LaSalle Avenue South, Suite 500	Minneapolis	MN 55402
Phone Number	Email	
(612) 376-2452	andrew.tarara@aecom.com	
Fees and Mailing of Closure Request		<b></b> .
<ol> <li>Send a copy of page one of this form and the applicable ch. N (Environmental Program Associate) at http://dnr.wi.gov/topic/</li> </ol>	IR 749, Wis. Adm. Code, fee(s) to the DNR Re / <mark>Brownfields/Contact.html</mark> . Check all fees th	gional EPA at apply:
\$1,050 Closure Fee	\$300 Database Fee for Soil	
\$350 Database Fee for Groundwater or	Total Amount of Payment \$	
	🔀 Resubmittal, Fees Previously Paid	
<ol> <li>Send one paper copy and one e-copy on compact disk of t assigned to your site. Submit as unbound separate document</li> </ol>	he entire closure package to the Regional Pr s in the order and with the titles prescribed by	oject Manager this form, For

electronic document submittal requirements, see http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf.

#### Site Summary

If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.

#### 1. General Site Information and Site History

- A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings. SE of NW 1/4, Sec. 15,T49N, R14W. About 2,000 feet north of intersection of Corning and Winter Streets.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use. Between sometime in 1930s to 1989, used as a bulk gasoline and light oils terminal. Had 14 ASTs and 4 USTs. Structures removed in 1992-1993, with subsurface piping removed in 2001. No structures or property usage since 1993.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
   Per Douglas County GIS website (http://douglascowi.wgxtreme.com/) Site properties zoned either commercial (G2) or manufacturing (G3). Parcel documentation included in Attachments F and G.
- D. Describe how and when site contamination was discovered. 1986 petroleum-contaminated soil and groundwater discovered as part of Phase II work for potential property transfer
- E. Describe the type(s) and source(s) or suspected source(s) of contamination.
  ~1965-AST rupture, unknown product and quantity;
  3/29/78-AST loading area, 450 gal (unknown recovered), #2 fuel oil;
  12/27/80-AST tank valve, 75-100 gal (~100 gal recovered), #2 fuel oil;
  3/11/80-AST relief valve, 500 gal (unknown recovered), unleaded gasoline;
  10/31/81-William Pipeline pumphouse overflow (property to south of Unocal), 120,000 gal (some flowed onto Unocal property), unleaded gasoline, 36,000 gal recovered;
  8/24/92-Williams Pipeline pumphouse, 3,100 gal (2,700 gal recovered), #2 fuel oil;
  10/5/85-loading rack pipeline, 825 gal (225 recovered), #2 fuel oil
- F. Other relevant site description information (or enter Not Applicable). Site under jurisdiction of Wisconsin Department of Safety and Professional Services (WDSPS). Site closure request sent to WDSPS on 01/28/2013. Based on residual petroleum-contaminated groundwater and soil, Site will need to be registered on WDNR's GIS Registry.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases. Unocal Corp Superior Terminal - 02-16-000336: combined with 03-16-000145 in May 2000 Unocal Corp Superior Terminal - 02-16-000474: combined with 03-16-000145 in May 2000
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property. Magellan Pipeline - 02-16-000475 on property directly south of Site No other BRRTS sites impacted by contamination from this Chevron site.

### 2. General Site Conditions

- A. Soil/Geology
  - i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.

In general, the site has from 8 to 25 feet of surficial red clay [Unified Soil Classification System (USCS) CH] underlain by silt (ML) and silty sand (SM).

- Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
   Fill encountered in former UST basins and generally consist of 3 to 12.5 feet of silty clay and clay. Fill also encountered in areas of former ASTs. These soils generally consist of up to 10 feet of native non-impacted clay.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation. Based on literature, depth to bedrock (sandstone) approximately 280 feet. Bedrock not encountered during site investigation.
- iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).

Majority of ground surface slightly undulating consisting of natural soil and vegetation. Site contains former bioremediated soil cells and two storm water ponds. One pond consists of storm water from biocell. All structures and pavement associated with former fuel terminal have been removed. A north-south trending railroad spur is located along the western boundary of Site. Storm water ditches located along eastern and northern Site boundaries.

B. Groundwater

i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.

Depth to groundwater ranges between 2 and 15 feet below ground surface, depending on the time of year and topography. Water table found in clay or silty sand units.

ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

The most recent groundwater elevations were measured on July 10, 2012. The groundwater contours show that the shallow groundwater south of the northern storm water pond flows in a westerly direction, while the flow direction becomes northeasterly at and north of that pond. The horizontal hydraulic gradient on July 10th was approximately 0.01. In general, the July 2012 groundwater flow pattern is very similar to the flow pattern observed at the site for at least the past six years.

iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

Based on slug test data, the hydraulic conductivity values ranged from 8x10-4 to 6x10-5 centimeters per second. Assuming a hydraulic gradient of 0.01 and an effective porosity of 0.2, groundwater flow velocity is approximately 40 to 3 feet per year.

iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).

City of Superior obtains potable water from Lake Superior; therefore, no municipal wells within 1,200 of Site. Based on groundwater receptor survey, no private wells within 1,200 of Site.

### 3. Site Investigation Summary

### A. General

i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

Site investigative information and data have been previously submitted to WDSPS (state lead agency). As stated above, site closure request report submitted to WDSPS on 01/28/2013. The closure request report included summary of site investigative work or referenced previously submitted reports that provided site investigation data.

In summary, site investigation was initiated in 1986. More than 50 direct-push borings sampled and 22 monitoring wells installed and sampled. Eight areas identified as having soil concentrations above applicable NR 720 residual contaminant levels and direct-contact standards at depths up to 15 feet below ground surface.

Groundwater samples have been collected from the groundwater monitoring network since 1986. Based on results of most recent groundwater samples collected in July 2012, four wells contained a petroleum-related compound with a concentration above an applicable NR 140 Enforcement Standard. The last eight rounds of analytical results show that, in general, hydrocarbon concentrations in all four wells are either stable or declining.

An October 1, 2002, letter from the Wisconsin Department of Commerce to Unocal stated that the site investigation had been completed.

 ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts. The source area for the former petroleum terminal was located on two separate parcels: Douglas County property IDs -04-804-01033-00 and 04-804-01035-00. Petroleum-contaminated soil was identified on these two parcels, as well as extending slightly on to PID #04-804-00977-00 - located immediately east of source areas.

Petroleum-contaminated groundwater found on the same three parcels, as well as most likely on PID #048040103600 - located northwest and north of source areas (down groundwater gradient).

iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

On Parcel ID No. 04-804-01036-00, a concrete secondary containment for the previous onsite ASTs is still in place, submerged under an unknown depth of water, and fenced in, impeding further investigation.

### B. Soil

i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.

The SI identified eight areas with soil concentrations above direct-contact standards and/or NR 720 generic RCLs. These are areas that are related to separate releases.

- Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.
   benzene 17 ppm, ethylbenzene 28 ppm, toluene 36 ppm, total xylenes 129 ppm, 1,3,5-trimethylbenzene 57 ppm, 1,2,4-trimethylbenzene 120 ppm, MTBE 2.2 ppm, naphthalene 35 ppm, GRO 4,200 ppm, DRO 1,800 ppm
- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/ information in Attachment C.

Performance Standard - WDSPS approved soil cleanup concentrations to NR 746 direct contact levels. Assumes land use will continue to be commercial/industrial.

- C. Groundwater
  - Describe degree and extent of groundwater contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

The most recent groundwater samples collected in July 2012 from four of the on-site monitoring wells contained concentrations of at least one compound above an NR 140 ES. Based on the historical analytical results of samples collected from the groundwater monitoring network, four separate, relatively small groundwater plumes exist on site. The location of the impacted groundwater appears to be related to the location of past petroleum releases.

No known water supply wells or buildings in the area of the impacted groundwater; therefore, no anticipated risk to these receptors.

ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.

No measurable free product has been encountered in the on-site groundwater monitoring network.

### D. Vapor

- Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.
   Vapor pathway was not assessed since no building structures or any known subsurface utility corridors were present.
- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both). Not applicable.

### E. Surface Water and Sediment

i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

No surface water bodies in the immediate vicinity of site; therefore, surface water and sediment pathway not assessed.

A storm water pond was constructed to hold and treat leachate collected from the soil treatment biocell. The pond is approximately 100 feet long and 100 feet wide, with earthen berms approximately 3 feet high. A 40-mil PVC liner was placed on the bottom and sides of the pond. The liner was extended over the earthen containment berms and was keyed into them. An aeration system (water diffuser) was installed to treat any residual hydrocarbons present in the biocell effluent. A Wisconsin Pollutant Discharge Elimination System (WPDES) permit was also obtained to discharge treated biocell effluent to the adjacent ditch. Discharge sampling and analysis of treated water has been in accordance with the WPDES permit. Monthly discharge monitoring reports are submitted as part of this permit.

ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.
 Treated biocell effluent discharged to the adjacent storm water ditch has met the requirements of the WPDES permit.

### 4. Remedial Actions Implemented and Residual Levels at Closure

A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

Remedial alternatives were evaluated for this Site based on the hydrogeologic and chemical characteristics of soil and groundwater obtained from the SI report prepared by STS (Site Investigation Report, Former Unocal Superior Terminal. March 5, 1997). Remedial options were also evaluated with regard to relative cost, feasibility, anticipated effectiveness, compliance with state regulations, and applicability for this Site by ARCADIS (Remedial Action Options Report, Unocal Superior Terminal. April 4, 2002.). Based on these evaluations, ARCADIS recommended that on-site biotreatment cells be selected as the primary remedial option to achieve applicable soil clean-up standards set for this Site and to address the

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source of groundwater contamination.

Annual reports previously submitted to WDSPS provided details of the remedial actions.	These reports include:
ARCADIS, 2004. 2003 Annual Report, Former Unocal Terminal. May 14, 2004.	-
ARCADIS, 2005. 2004 Annual Report, Former Unocal Terminal. April 28, 2005.	
ARCADIS, 2006. 2005 Annual Report, Former Unocal Terminal. March 6, 2006.	
Gannett Fleming, 2006. Status Update, Former Unocal Terminal. November 21, 2006.	
Gannett Fleming, 2009. Status Update, Former Unocal Terminal. July 31, 2009.	
Gannett Fleming, 2009. Status Update, Former Unocal Terminal. May 18, 2009.	
Gannett Fleming, 2010. Status Update, Former Unocal Terminal. July 26, 2010.	
Gannett Fleming, 2010. Status Update, Former Unocal Terminal. September 7, 2010.	
Gannett Fleming, 2010. Status Update, Former Unocal Terminal. December 17, 2010.	
Gannett Fleming, 2011. Status Update, Former Unocal Terminal. June 13, 2011.	
Gannett Fleming, 2011. Status Update, Former Unocal Terminal. September 12, 2011.	
Gannett Fleming, 2011. Status Update, Former Unocal Terminal. December 15, 2011.	
Gannett Fleming, 2012. Status Update, Former Unocal Terminal. June 12, 2012.	
Gannett Fleming, 2012. Status Update, Former Unocal Terminal. August 29, 2012.	

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code. As stated above in Section 1.D., a portion of the released product was recovered following the historical petroleum releases.
- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.

Based on SI results, eight areas were identified as having soil concentrations above the site clean-up standards (applicable industrial direct-contact concentrations). The soil in these areas was excavated until soil concentrations were below applicable direct-contact standards. The excavated soil was placed in on-site bio-treatment cells. The soil was mixed with wood chips at a two to one ratio of soil to compost. Soil amendments consisting of 10:10:10 nitrogen to phosphorus to potassium fertilizer and an agricultural fertilizer (90% sulfur) were added to the soil and compost mixture. Approximately one pound of amendment mixture was added per one cubic yard of soil/compost mixture. The biocell soil was turned with additional nutrient/compost mixture added as necessary. Soil confirmation samples were also periodically collected from the treated soil. This treatment and sampling process was continued until the confirmation samples had concentrations below direct contact concentrations. The treated soil was used to backfill the excavated areas.

- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.
   Bioremediation was selected as the remediation method based on site location, property use and future us, and depth of impact.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.

Soil confirmation samples collected from the excavation sidewalls and base confirmed all soil with concentrations above direct-contact standards have been removed; however, some samples had concentrations above applicable NR 720 RCLs. This included samples collected from Areas 1, 3, 4, 5, and 8. These areas are shown on the attached Figure B.2.b.

- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact. All soil with concentrations above direct-contact standards have been removed within 4 feet of ground surface.
- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.
  Soil confirmation samples collected from the excavation sidewalls and base confirmed all soil with concentrations above direct-contact standards has been removed; however, some samples had concentrations above applicable NR 720 RCLs. This included samples collected from Areas 1, 3, 4, 5, and 8. These areas are shown on the attached Figure B.2.b.
- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.

Location of residual soil contamination will be documented in GIS Registry. Natural attenuation of groundwater is expected to address the residual groundwater contamination.

I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume). Concentrations of parameters above an NR 140 ES are stable or receding.

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J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).
 All soil remediated with concentrations above applicable industrial direct contact concentrations.

No surface water bodies within or immediately adjacent to Site.

Groundwater plumes are stable or receding. No groundwater receptors within or near Site.

No buildings or structures present at Site, thus no potential vapor receptors.

- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain. No system hardware is remaining in place at the site.
- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances. The most recent groundwater samples (July 2012) collected from monitoring wells W-2R, W-12, W-16, and W-17 had concentrations of benzene above its applicable ES. Concentrations of total trimethylbenzenes, ethylbenzene, and naphthalene in the July 2012 sample from W-2R were also above their respective ESs.
- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
  Since there are not any structures or buildings on the Site, waper intrusion pathway was pet evaluated.

Since there are not any structures or buildings on the Site, vapor intrusion pathway was not evaluated.

N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.

No surface water bodies in the immediate vicinity of Site; therefore, surface water and sediment pathway not assessed.

A storm water pond was constructed to hold and treat leachate collected from the soil treatment biocell. Monthly discharge monitoring reports are submitted as part of WPDES permit. Treated biocell effluent discharged to the adjacent storm water ditch has met the requirements of the this permit.

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#### Continuing Obligations: Situations where sites, including all affected properties and rights-of-way (ROWs), are included 5. on the DNR's GIS Registry. In certain situations, maintenance plans are also required, and must be included in Attachment D.

Directions: For each of the 3 property types below, check all situations that apply to this closure request. (NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

	This situation property o	n applies to t r Right of Wa	he following y (ROW):		
	Property Typ	e:		Case Closure Situation - Continuing Obligation Inclusion on the GIS Registry is Reguired (ii xiv.)	Maintenance Plan
	Source Property	Affected Property (Off-Source)	ROW		Required
i.				None of the following situations apply to this case closure request.	NA
ii.	$\boxtimes$	$\boxtimes$		Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	$\boxtimes$	$\boxtimes$		Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
				Not Abandoned (filled and sealed)	NA
				Continued Monitoring (requested or required)	Yes
۷.				Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.				Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.		$\boxtimes$		Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.				Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.			NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
<b>x</b> .			NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.			NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii				Vapor: Commercial/industrial exposure assumptions used.	NA
xiii.				Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.		$\square$		Site-specific situation: (e.g., fencing, methane monitoring, other) ( <i>discuss</i> with project manager before submitting the closure request)	Site specific

#### Underground Storage Tanks 6.

A.	Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action?	• Yes	🔿 No
В.	Do any upgraded tanks meeting the requirements of ch. ATCP 93, Wis. Adm. Code, exist on the property?	⊖ Yes	No

C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored?

⊖Yes ⊖No

# General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

### Data Tables (Attachment A)

### **Directions for Data Tables:**

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e., do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data <u>must</u> include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15 (3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (PDF).

### A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates for all groundwater sampling points (e.g., monitoring wells, temporary wells, sumps, extraction wells, potable wells) for which samples have been collected.
- A.2. Soil Analytical Results Table(s): Table(s) showing all soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- A.3. **Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- A.4. **Vapor Analytical Table(s)**: Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.5. Other Media of Concern (e.g., sediment or surface water): Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, and time period for sample collection.
- A.6. Water Level Elevations: Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.7. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

## Maps, Figures and Photos (Attachment B)

### **Directions for Maps, Figures and Photos:**

- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11 x 17 inches, in a PDF readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- Include <u>all</u> sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.,) should be a separate PDF.
- Maps, figures and photos should be dated to reflect the most recent revision.

### B.1. Location Maps

- B.1.a. Location Map: A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. Detailed Site Map: A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for all affected properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. **RR Sites Map:** From RR Sites Map (http://dnrmaps.wi.gov/sl/?Viewer=RR Sites) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

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### **B.2.** Soil Figures

- B.2.a. Soil Contamination: Figure(s) showing the location of all identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720.Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. Residual Soil Contamination: Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedence (0-4 foot depth).

### **B.3.** Groundwater Figures

- B.3.a. Geologic Cross-Section Figure(s): One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
  - Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between • direct contact and the groundwater pathway RCLs.
  - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES. •
  - Surface features, including buildings and basements, and show surface elevation changes.
  - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
  - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. Groundwater Isoconcentration: Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data. B.3.c. Groundwater Flow Direction: Figure(s) representing groundwater movement at the site. If the flow direction varies
- by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. Monitoring Wells: Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.

### B.4. Vapor Maps and Other Media

- B.4.a. Vapor Intrusion Map: Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. Other media of concern (e.g., sediment or surface water): Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded. B.4.c. Other: Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).
- B.5. Structural Impediment Photos: One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

## Documentation of Remedial Action (Attachment C)

### **Directions for Documentation of Remedial Action:**

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc.).
- If the documentation requested below has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
  - C.1. Site investigation documentation, that has not otherwise been submitted with the Site Investigation Report.
  - C.2. Investigative waste disposal documentation.
  - Provide a description of the methodology used along with all supporting documentation if the RCLs are different than C.3. those contained in the Department's RCL Spreadsheet available at: http://dnr.wi.gov/topic/Brownfields/Professionals.html.
  - C.4. Construction documentation or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
  - C.5. Decommissioning of Remedial Systems. Include plans to properly abandon any systems or equipment.
  - Other. Include any other relevant documentation not otherwise noted above (This section may remain blank). C.6.

### Maintenance Plan(s) and Photographs (Attachment D)

### **Directions for Maintenance Plans and Photographs:**

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3

- Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor D.1. mitigation system, feature or other action for which maintenance is required:
  - Provide brief descriptions of the type, depth and location of residual contamination.

- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
- Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
- Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. Location map(s) which show(s): (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.3. **Photographs** for site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf.

# Monitoring Well Information (Attachment E)

#### **Directions for Monitoring Well Information:**

For all wells that will remain in use, be transferred to another party, or that could not be located; attach monitoring well construction and development forms (DNR Form 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400\_113\_1\_2.pdf)

#### Select One:

No monitoring wells were installed as part of this response action.

All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site

### Select One or More:

- Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
- One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
- One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

#### Source Legal Documents (Attachment F)

### **Directions for Source Legal Documents:**

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

F.1. Deed: The most recent deed with legal description clearly listed.

**Note:** If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.

- F.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. Verification of Zoning: Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

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BPPTS	No

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### Notifications to Owners of Affected Properties (Attachment G)

#### Directions for Notifications to Owners of Affected Properties:

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31- 19.39,Wis. Stats.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf.

State law requires that the responsible party provide a 30-day, written advance notification to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned. Use form 4400-286, Notification of Continuing Obligations and Residual Contamination, at http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation. (These items will not be placed on the GIS Registry.)

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties. Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- Certified Survey Map: A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- Verification of Zoning: Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- Signed Statement: A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

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N	otifications to Owners of Affected Properties																		
									F	Reas	ons	Noti	ficat	ion l	Lette	er Se	ent:		
ID	Address of Affected Property	Parcel ID No.	Date of Receipt of Letter	Type of Property Owner	WTMX	WTMY	Residual Groundwater Contamination = or > ES	<b>Residual Soil Contamination Exceeds RCLs</b>	Monitoring Wells: Not Abandoned	Monitoring Wells: Continued Monitoring	Cover/Barrier/Engineered Control	Structural Impediment	Industrial RCLs Met/Applied	Vapor Mitigation System(VMS)	Dewatering System Needed for VMS	<b>Compounds of Concern in Use</b>	Commercial/Industrial Vapor Exposure Assumptions Applied	Residual Volatile Contamination Poses Future Risk of Vapor Intrusion	Site Specification Situation
А	Vacant	048040097700 +	12/07/2015	APO	358866	697442	$\times$	$\times$											
В	2301 Winter Street	048040093500 +	12/07/2015	SPO	358731	697366	$\times$	$\times$											
С	Vacant	048040093600	12/07/2015	APO	358732	697470	$\times$					$\times$							$\times$
D	Vacant	048040093300	12/07/2015	SPO	358813	697431	$\times$	$\times$											

#### Signatures and Findings for Closure Determination If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete un/ll corrected. Check the correct signature block below for this case closure request, and have the proper environmental professional(s) sign this document, in accordance with the ch. NR 700 Wis. Adm. Code rule series. Both boxes may be checked if applicable to this case ciosure. A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies). in this situation, the closure request must be prepared by, or under the supervision of, a professional engineer and a hydrogeologist, as defined in ch, NR 712, Wis, Adm. Code. Include both signatures provided below with the submittal. The response action(s) for this site addresses media other than groundwater. In this situation, the case closure request must be prepared by, or under the supervision of, a professional engineer, as defined in ch. NR 712, Wis. Adm. Code. The "engineering certification" language below, at a minimum, must be signed. Engineering Certification Clifford C. Wright, P.E. hereby certify that I am a registered professional engineer In the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this case closure request has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. All phases of work necessary to obtain data, develop conclusions, recommandations and prepare submittals for this case closure request have been prepared by me, or their preparation has been supervised by me. Specifical with respective appliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ONE Adm . Code, and all necessary remedial actions have been completed in accordance with chs. NE NR 722, NR 724 and NR 726, Wis. Adm. Codes." CLIFFORD C Clifford C. Wright inee**WRIGHT** Pro E-31265 Printed Name MADISON ro any Hydrogeologist Certification Jeffrey J. King, P.G.

I Jeffrey J. King, P.G. hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. All phases of work necessary to address groundwater contamination including obtaining data, developing conclusions, recommendations and preparing submittals for this case closure request have been preparad by me, or their preparation has been supervised by me. Specifically, with respect to compliance with the rules, in my profassional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes.\*

Jeffrey J. King Printed Name Signature

Title

Senior Hydrogeologist

# ATTACHMENT A

### DATA TABLES

- A1A Groundwater Analytical Results (PVOCs, GRO, DRO, & Lead)
- A1B Groundwater Analytical Results (PAHs)
- A2A Pre-Remedial Soil Analytical Results (All Areas)
- A2B Post-Remedial Soil Analytical Results (Areas 3, 4, 5, 6, 7, and 8)
- A2C Post-Remedial Soil Analytical Results (Area 2)
- A2D Post-Remedial Soil Analytical Results (Area 1)
- A3 Residual Soil Contamination
- A4 Vapor Analytical Table- Not included since no vapor samples collected
- A5 Other Media of Concern- Not included since no other media of concern at site
- A6 Water Level Elevations
- A7 Other Not included Not Applicable for This Site

# CHEVRON ENVIRONMENTAL MANAGEMENT CO. FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN

# TABLE A1A

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

D	aramatar			Ethyl-	Total			Trimethyl-			Dissolved
I.		Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Preve	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
W-1	10/20/86	ND	2		ND						
	02/04/87	ND	ND		ND						
	05/17/88	ND	ND		ND						
	06/22/89	ND	ND	ND	ND				<10 <sup>(1)</sup>	<1100 <sup>(2)</sup>	
	04/13/90	ND	ND	ND	ND		ND		<10 <sup>(1)</sup>		ND
	01/21/91	ND	ND	ND	ND		ND		<13(1)	<43 <sup>(2)</sup>	ND
	03/26/92	ND	ND	ND	ND		ND				
	06/01/93	ND	ND	ND	ND		ND		<13	90	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/10/95	ND	ND	ND	ND		ND				ND
	08/22/95	ND	ND	ND	ND		ND		<100	400	
	11/25/96	ND	ND	ND	ND		ND		<100	130	ND
	05/21/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	10/03/06	(3)									
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-2	10/20/86	ND	4		8						
	11/06/86	ND	ND		ND						
	02/04/87	ND	ND		ND						
	05/17/88	320	1,700		3,000				13,000 <sup>(1)</sup>		
	06/22/89	53	570	110	5,000				59,000 <sup>(1)</sup>		
	04/13/90	61	260	49	540		ND		3,700 <sup>(1)</sup>		
	01/21/92	100	ND	170	130		ND		3,800 <sup>(1)</sup>	$1700^{(2)}$	
	06/01/93	140	180	140	670		ND			4,200	
	06/05/94	190	98	130	260		130		8,200	2,700	
	02/10/95	130	59	83	101		ND				
	08/22/95	330	230	220	660		140		4,700	700	

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D.	anamatan			Ethyl-	Total			Trimethyl-			Dissolved
ra I	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Preven	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	11/25/96	150	61	87	67		64		2,500	650	ND
	05/20/97	170	98	140	170		230	212	ND	3,100	
	04/02/99	160	160	160	270		16	280	3,700	510	5.4
	07/13/99	130	96	130	78		6.6		3,500	670	5.6
	11/09/99	160	92	110	120		ND	108	2,700	800	ND
	03/29/00	146	103	122	136		7.08	111.9		500	ND
	06/28/00	156	52.7	95.1	40.7		33.5	52.5	1,680	336	6.93
	09/27/00	104	90.3	118	151	42.3	<4.0	220.8	4,910	213	15.6
	09/11/01	120	60	90	110	20	7.5	174			
	12/11/01	170	66	110	43		56	72			< 0.002
	06/06/02	130	61	96	64		49	85	3,600	690	<2.0
(Dup)	06/06/02	110	56	89	78		29	147	4,500		<2.0
		Abandoned									
W-2R	05/05/09	320	1,700	930	3,700	570	<5.0	2,020			14
	04/28/10	320	350	1,000	1,700	640	<2.0	1,820			0.0083
	08/03/10	240	390	680	1,000	430	<5.0	1,040			< 0.0050
	10/25/10	200	200	570	940	37	<2.0	910			
	05/04/11	260	250	800	1,000	410	<2.0	1,060			
	08/01/11	120	170	480	990	380	<2.0	1,020			
	10/24/11	160	230	610	1,200	450	<5.0	1,270			
	05/15/12	250	300	740	1,300	410	<2.0	930			
	07/10/12	110	170	470	1,000	350	<5.0	1,050			
W-3	10/20/86	170	51		110						
	11/06/86	6	8		10						
	02/04/87	ND	3		ND						
	07/07/87	ND	ND		ND						

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

D.	manatar			Ethyl-	Total			Trimethyl-			Dissolved
ra Fa	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	05/17/88	ND	ND		2						
	04/13/90	ND	ND	ND	ND		ND		<10 <sup>(1)</sup>		2.8
	01/21/92	21	ND	17	20		ND		410 <sup>(1)</sup>	400 <sup>(2)</sup>	0.6
	06/02/93	58	1.4	8.9	21		ND		890 <sup>(1)</sup>	530	
	06/05/94	23	20	17	17		21		480	270	
	02/09/95	ND	ND	ND	ND		ND				ND
	08/21/95	ND	ND	ND	ND		ND		<100	300	
	11/25/96	27	7.5	17	4.5		12		700	880	ND
	05/20/97	27	9.1	34	77		30	49	1,000	1,800	
	04/02/99	4.2	5.6	16	50		2.6	52	1,200	180	6.6
	07/13/99	2.6	1.8	16	18		2.3		970	480	3.7
	11/09/99	9.3	3.6	6	ND		2.3	5.8	990	830	15
	03/29/00	40.5	7.38	29.8	48.7		16.2	34		617	5.79
	06/28/00	12.3	5.47	1.04	6.78		2.49	3.32	209	<100	<5.0
	09/27/00	2.04	< 0.5	0.932	2.43	<2.00	< 0.200	<2.00	102	<100	<5.0
	09/10/01	10	<1.0	3.1	<3.0	<2.5	<5.0	1.2			
	12/12/01	< 0.5	<1.0	<1.0	<2.0		<8.0	<2.0			< 0.002
	06/06/02	7.2	1.6	7.9	9.6		<8.0	4.4	<200	110	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	1,200	7.7
	05/05/09	1.9	2	14	44	23	<1.0	51			<5.0
	04/28/10	1	<1.0	1.6	<2.0	1.7	<1.0	<2.1			< 0.0050
	08/03/10	1.0	<1.0	3.7	4.9	4.2	<1.0	5.5			< 0.0050
	10/25/10	<1.0	<1.0	5.8	4.5	3.8	<1.0	5.1			0.0076
MW-4	06/22/89	ND	ND	ND	ND				$11^{(1)}$	<1100 <sup>(2)</sup>	
	04/13/90	ND	ND	ND	ND		ND		<10		2.8
	01/22/92	ND	ND	ND	ND		ND		<13	<43(2)	ND
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<99	<5.0
	05/05/09	<1.0	<1.0	1.3	4.4	<1.0	<1.0	5.1			<5.0

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

D				Ethyl-	Total			Trimethyl-			Dissolved
r:	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
MW-5	06/22/89	ND	ND	ND	ND				27(1)	<1100 <sup>(2)</sup>	ND
	04/13/90	ND	ND	ND	ND		ND		<10 <sup>(1)</sup>		ND
	01/22/92	ND	ND	ND	ND		ND		<13(1)	<43(2)	ND
	06/02/93	ND	ND	ND	ND		ND		<13	270	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/09/95	ND	ND	ND	ND		ND				1.0
	08/22/95	ND	ND	ND	ND		ND		<100	200	
	11/25/96	ND	ND	ND	ND		ND		<100	160	ND
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<100	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
MW-6	06/22/89	ND	ND	ND	ND				16(1)	<1100 <sup>(2)</sup>	
	04/13/90	ND	ND	ND	ND		ND		<10 <sup>(1)</sup>		3.9
	01/22/92	ND	ND	ND	ND		ND		<13(1)	<43(2)	1.0
	06/01/93	ND	ND	ND	ND		ND		<13	200	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/10/95	ND	ND	ND	ND		ND				ND
	08/22/95	ND	ND	ND	ND		ND		<100	200	
	11/25/96	ND	ND	ND	ND		ND		<100	310	ND
	05/20/97	ND	ND	ND	ND		ND		ND	ND	
	05/20/97	ND	ND	ND	ND		ND	<2.0	ND	ND	
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<93	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-7	04/22/90	ND	ND	ND	ND		ND		<10		7
	01/22/92	ND	ND	ND	ND		ND		<13	<43(2)	0.3
	06/02/93	ND	ND	ND	ND		ND		<13	300	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/09/95	ND	ND	ND	ND		ND				ND
	08/21/95	ND	ND	ND	ND		ND		<100	200	
	11/25/96	ND	ND	ND	ND		ND		<100	440	ND

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

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D	momotor			Ethyl-	Total			Trimethyl-			Dissolved
Га		Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	04/02/99	0.64	ND	ND	ND		ND	4.3	ND	ND	ND
	07/13/99	ND	ND	ND	ND		ND		ND	240	2.6
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	180	ND
	03/28/00	ND	ND	0.595	1.17		0.389	3.83		233	13.9
	06/28/00	< 0.5	< 0.5	< 0.5	< 0.5		< 0.2	<2.00	<50	<100	5.8
	09/27/00	< 0.5	< 0.5	< 0.5	< 0.5	<2.00	< 0.2	<2.00	<50	<100	<5.0
	09/10/01	<1.0	<1.0	<1.0	<3.0	<2.5	<5.0	<1.0			
	12/12/01	< 0.5	<1.0	<1.0	<1.0		<8.0	<2.0			< 0.002
	06/06/02	< 0.5	<1.0	<1.0	<3.0		<8.0	<2.0	<200	<100	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	290	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-8	04/22/90	0.49	ND	ND	ND		ND		<10 <sup>(1)</sup>		6.0
	01/22/92	ND	ND	ND	ND		ND		<13(1)	<43 <sup>(2)</sup>	1.0
	06/01/93	ND	ND	ND	ND		ND		<13	<25	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/10/95	ND	ND	ND	ND		ND				ND
	08/22/95	ND	ND	ND	ND		ND		<100	200	
	09/01/95	Abandoned									
W-8R	12/31/96	ND	ND	ND	ND		ND		<100	<100	<2
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	04/01/99	ND	ND	ND	ND		ND	1.4	ND	ND	15
	07/13/99	ND	ND	ND	ND		ND		ND	200	19
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	150	39
	03/29/00	ND	ND	ND	ND		ND	<2.00		ND	12.8
	06/28/00	< 0.5	< 0.5	< 0.5	< 0.5		< 0.2	<2.00	<50	<100	29.6
	09/27/00	< 0.5	< 0.5	< 0.5	<0.5	<2.00	< 0.2	<2.00	<50	<100	5.11
	09/11/01	<1.0	<1.0	<1.0	<3.0	<2.5	<5.0	<1.0			
	12/11/01	<1.0	<1.0	<1.0	<3.0		<5.0	<1.0			< 0.002
	06/06/02	< 0.5	<10	<10	< 3.0		< 8.0	< 2.0	<200	<100	<2.0

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

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De	momotor			Ethyl-	Total			Trimethyl-			Dissolved
Га		Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfor	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<99	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-9	01/21/92	ND	ND	ND	ND		ND		<13(1)	<43(2)	ND
	03/26/92	ND	ND	ND	ND		ND				
	06/01/93	ND	ND	ND	ND		ND		<13	110	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/09/95	ND	ND	ND	ND		ND				1.0
	08/21/95	ND	ND	ND	ND		ND		<100	400	
	11/25/96	ND	ND	ND	ND		ND		<100	<100	ND
	05/22/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	110	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-10	01/21/92	ND	ND	ND	ND		ND		<13(1)	<43(2)	ND
	03/26/92	ND	ND	ND	ND		ND				
	06/01/93	ND	ND	ND	ND		ND		<13	130	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/09/95	ND	ND	ND	ND		ND				ND
	08/21/95	ND	ND	ND	ND		ND		<100	200	
	11/25/96	ND	ND	ND	ND		ND		<100	<100	ND
	05/20/97	1.3	ND	ND	ND		ND	<2.00	ND	ND	
	06/06/02	< 0.5	<1.0	<1.0	<3.0		<8.0	<2.0	<200	<100	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<100	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-11	01/21/92	ND	ND	ND	ND		ND		<13	<43 <sup>(2)</sup>	7.0
	03/26/92	ND	ND	ND	ND		ND				
	06/01/93	ND	ND	ND	ND		ND		<13	110	
	06/05/94	ND	ND	ND	ND		ND		<100	<75	
	02/10/95	ND	ND	ND	ND		ND				ND
	08/21/95	ND	ND	ND	ND		ND		<100	300	
	11/27/96	ND	ND	ND	ND		ND		<100	<100	ND

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

L:\projects\Chevron\Sites\_WI\306390\_55289\_Superior\proj\_mgmt\corres\reports\jjk\_GIS Registry Information\03-16-000145 Closure Request\Attmt A\Table A1 A and B Table A1a 6 of 14

Parameter				Ethyl-	Total			Trimethyl-			Dissolved
ra Fa	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	05/21/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	04/01/99	ND	ND	ND	ND		ND	2.2	ND	ND	56
	07/13/99	ND	ND	ND	ND		ND		ND	230	8.2
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	240	8.3
	03/29/00	ND	ND	ND	ND		ND	<2.00		127	19.6
	06/28/00	< 0.5	< 0.5	< 0.5	< 0.5		< 0.2	1.67	2,000	<100	18.4
	09/26/00	< 0.5	< 0.5	< 0.5	< 0.5	<2.00	< 0.2	1.14	<50	<100	14.9
	09/11/01	2.2	<1.0	<1.0	<3.0	<2.5	<5.0	1.2			
	12/11/01	< 0.5	<1.0	<1.0	<3.0		<5.0	<2.0			< 0.002
	06/06/02	< 0.5	<1.0	<1.0	<3.0		<8.0	<2.0	<200	<100	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<99	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-12	01/21/92	7.2	6.3	7.2	28		ND		360 <sup>(1)</sup>	430 <sup>(2)</sup>	ND
	03/26/92	14	ND	3.1	1.6		ND				
	06/02/93	4	ND	ND	ND		ND		15	1,000	
	06/06/94	38	1	69	25		40		1,100	650	
	02/10/95	25	ND	80	14		ND				1.0
	08/22/95	38	16	63	19		16		1,000	900	
	11/27/96	110	14	20	40		ND		700	<100	ND
	05/21/97	20	3.6	8.6	ND		18	11	890	970	
	05/21/97	21	3.0	8.5	ND		19		890		
	04/02/99	20	1.8	ND	9		ND	49.8	87	290	ND
	07/13/99	13	ND	3.3	2.6		5.1	2.8	880	480	2.7
(Dup.)	07/13/99	12	0.57	3.8	2.3		4.5	2.4	930	440	2.6
	11/09/99	12	ND	2.1	ND		0.79	2.9	520	850	7.0
	03/29/00	56.7	2.24	7.90	20.6		2.79	14.65		710	13.4
	06/27/00	6.07	0.995	1.54	2.86		3.99	2.11	1,680	144	5.49
	09/26/00	5.75	< 0.5	2.17	4.33	2.33	< 0.20	1.81	633	1,170	7.11
	09/11/01	6.1	<1.0	2.10	<3.0	<2.5	<5.0	1.7			
	12/11/01	12	<1.0	<1.0	<2.0		<8.0	<2.0			< 0.002

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

L:\projects\Chevron\Sites\_WI\306390\_55289\_Superior\proj\_mgmt\corres\reports\jjk\_GIS Registry Information\03-16-000145 Closure Request\Attmt A\Table A1 A and B Table A1a 7 of 14

Parameter				Ethyl-	Total			Trimethyl-			Dissolved
Га		Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	10/03/06	35	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	460	670	<5.0
	05/05/09	49	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
	04/28/10	43	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			0.0061
	08/03/10	60	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			< 0.0050
	10/25/10	73	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			0.0086
	05/03/11	46	< 0.50	< 0.50	<1.0	<1.0	<1.0	<2.0			
	08/01/11	72	< 0.50	0.85	<1.0	1.9	<1.0	<2.0			
	10/24/11	63	< 0.50	0.84	<1.0	1.4	<1.0	<2.0			
	05/15/12	58	< 0.50	1.7	2.7	3.5	<1.0	<2.6			
	07/10/12	62	< 0.50	< 0.50	1.1	<1.0	<1.0	<2.0			
W-13	01/21/92	13	11	11	52		ND		550 <sup>(1)</sup>	360 <sup>(2)</sup>	ND
	03/26/92	2.6	ND	3.5	414		ND				ND
	06/02/93	1.2	ND	ND	ND		ND		<13	62	
	06/06/94	ND	ND	ND	ND		ND		<100	<75	
	02/10/95	ND	ND	ND	ND		ND				ND
	08/22/95	1	ND	ND	ND		ND		<100	700	
	11/25/96	ND	ND	ND	ND		ND		<100	<130	ND
	05/21/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	05/22/97	ND	ND	ND	ND		ND		ND	ND	
	04/02/99	ND	ND	ND	ND		ND	1.2	ND	ND	8.0
	07/13/99	ND	ND	ND	ND		ND	<2.00	ND	ND	6.6
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	250	7.0
	03/29/00	ND	ND	0.665	2.65		0.325	3.46		255	ND
	06/28/00	< 0.5	< 0.5	< 0.5	< 0.5		< 0.2	<2.00	<50	<100	30.8
	09/26/00	< 0.5	< 0.5	< 0.5	< 0.5	<2.00	< 0.2	<2.00	<50	151	7.67
	06/06/02	< 0.5	<1.0	<1.0	<3.0		<8.0	<2.0	<200	150	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	230	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-14	12/30/96	ND	ND	ND	ND		ND		<100	<100	<2
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

L:\projects\Chevron\Sites\_WI\306390\_55289\_Superior\proj\_mgmt\corres\reports\jjk\_GIS Registry Information\03-16-000145 Closure Request\Attmt A\Table A1 A and B Table A1a 8 of 14

D.	Parameter			Ethyl-	Total			Trimethyl-			Dissolved
r:	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfo	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	<b>Date Collected</b>										
	04/01/99	ND	ND	ND	ND		ND	<2.00	ND	ND	12
	07/13/99	ND	ND	ND	ND		ND	<2.00	ND	ND	1.8
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	180	ND
	03/28/00	ND	ND	1.37	3.64		ND	1.74		ND	16.9
	06/28/00	< 0.5	< 0.5	< 0.5	< 0.5		< 0.2	<2.00	<50	<100	15.8
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<99	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-15	12/31/96	ND	ND	ND	ND		ND		<100	<100	<2
	05/20/97	ND	ND	ND	ND		ND	<2.00	ND	ND	
	04/01/99	0.51	ND	ND	ND		ND	2.3	54	ND	23
	07/13/99	ND	ND	0.57	ND		ND	1.3	79	ND	2.2
	11/09/99	ND	ND	ND	ND		ND	<2.00	ND	370	7.5
	03/28/00	3.19	ND	1.28	2.49		0.418	9.46		177	38.5
	06/28/00	0.52	0.792	0.789	1.54		0.546	<2.00	<50	<100	6.49
	09/27/00	< 0.5	< 0.5	< 0.5	< 0.5	<2.00	< 0.20	<2.00	<50	<100	<5.0
	09/10/01	<1.0	<1.0	<1.0	<3.0	<2.5	<5.0	<2.00			
	12/12/01	< 0.5	<1.0	<1.0	<2.0		<8.0	<2.0			< 0.002
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	280	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
W-16	05/05/09	1,300	25	120	450	<5.0	<5.0	114			<5.0
	04/28/10	2,500	<5.0	180	45	24	<5.0	53.8			
	08/03/10	2,400	<10	230	45	18	<10	53			
	10/25/10	2,700	<10	200	23	<10	<10	<23			
	05/03/11	2,000	3.2	180	47	11	<5.0	<21.0			

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

D	manatan			Ethyl-	Total			Trimethyl-			Dissolved
r:	arameter	Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enfor	rcement Standard	5	800	700	2,000	100	60	480	No Std	No Std	15
Prever	ntive Action Limit	0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
	08/01/11	2,400	5.1	160	54	7.4	<5.0	<30.0			
	10/24/11	2,200	<5.0	89	12	<10	<10	<20			
	05/15/12	480	1.7	19	18	<1.0	<1.0	7.6			
	07/10/12	1,000	3.9	44	56	1.2	<1.0	24.5			
W-17	05/05/09	19	2.8	<1.0	38	16	<1.0	112			<5.0
	04/28/10	19	2.5	<1.0	36	<1.3	<1.0	104			
	08/03/10	18	<1.0	<1.0	2.1	<1.3	<1.0	4.3			
	10/25/10	15	1.6	<1.0	9.0		<1.0	10.5			
	05/03/11	14	2.0	< 0.50	28.0	8.2	<1.0	40.3			
	08/01/11	13	1.1	< 0.50	19.0	8.1	<1.0	<12.0			
	10/24/11	12	0.7	< 0.50	6.4	1.7	<1.0	<5.1			
	05/15/12	10	1.9	< 0.50	33.0	7.0	<1.0	<69			
	07/10/12	7.5	2.1	< 0.50	28.0	8.2	<1.0	<42			
W-18	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
	04/28/10	<1.0	<1.0	<1.0	<2.0	<1.3	<1.0	<2.0			
	08/03/10	<1.0	<1.0	<1.0	<2.0	<1.3	<1.0	<2.0			
	10/25/10	<1.0	<1.0	<1.0	<2.0	<1.3	<1.0	<2.0			
AMW-1	06/10/02	<5.0	<5.0	<5.0	<5.0		<5.0		<200	<100	<2.0
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<97	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
AMW-2	06/10/02	<5.0	<5.0	<5.0	<5.0		<5.0		<200	<100	<2
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<100	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
AMW-3	06/10/02	560	4,500	720	7,000		<5.0		31,000	6,600	53
(Dup)	06/10/02	550	4,500	730	7,100		<5.0		23,000	7,700	52
		Abandoned									
AMW-3R	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0
	04/28/10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			0.013
	08/03/10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			< 0.0050
	10/25/10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			0.0060

# GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

L:\projects\Chevron\Sites\_WI\306390\_55289\_Superior\proj\_mgmt\corres\reports\jjk\_GIS Registry Information\03-16-000145 Closure Request\Attmt A\Table A1 A and B Table A1a 10 of 14

### GROUNDWATER ANALYTICAL RESULTS - PVOCs, GRO, DRO, & LEAD (µg/ℓ)

Parameter				Ethyl-	Total			Trimethyl-			Dissolved
		Benzene	Toluene	benzene	Xylenes	Naphthalene	MTBE	benzenes	GRO	DRO	Lead (mg/l)
Enforcement Standard		5	800	700	2,000	100	60	480	No Std	No Std	15
Preventive Action Limit		0.5	160	140	400	10	12	96	No Std	No Std	1.5
Location	Date Collected										
AMW-4	06/10/02	<5.0	<5.0	<5.0	<5.0		<5.0		<200	190	<2
	10/03/06	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<30	<100	<5.0
	05/05/09	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0			<5.0

### NOTES:

All results shown are in micrograms per liter  $(\mu g/\ell)$  unless otherwise noted.

ND = Not detected above target detection limit.

< = Not detected above target detection limit.

GRO = Gasoline Range Organics.

DRO = Diesel Range Organics.

--- = Not analyzed.

No Std = No NR 140 standard for this compound.

Concentrations shown in **bold** are above the NR 140 Enforcement Standard for that compound.

Concentrations shown in italic are above the NR 140 Preventative Action Limit for that compound.

NR 140 standards obtained from http://docs.legis.wisconsin.gov/code/admin\_code/nr/140.pdf on 01/09/2013.

FOOTNOTES:

(1) Total Petroleum Hydrocarbons as gasoline.

(2) Total Petroleum Hydrocarbons as #2 Fuel Oil.

(3) Well casing bent. Could not collect sample.

### CHEVRON ENVIRONMENTAL MANAGEMENT CO. FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN

### TABLE A1B

### GROUNDWATER ANALYTICAL RESULTS - PAHs (µg/ℓ)

Parameter		Acenaphthylene	Anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
NR 140 Er Standard	nforcement	No Std	3000	0.2	No Std	0.2	400	400	100	No Std	250
NR 140 Preventive Action Limit		No Std	600	0.02	No Std	0.02	80	80	10	No Std	50
Location	Date Collected										
W-1	05/05/09	<1.4	< 0.056	< 0.056	< 0.056	<0.14	<0.14	< 0.28	<1.4	<0.11	<0.28
W-2R	05/05/09	<1.3	<0.051	< 0.051	< 0.051	<0.13	<0.13	< 0.26	340	0.38	<0.26
W-3	05/05/09	15	<0.047	<0.047	<0.047	<0.12	<0.12	<0.24	15	<0.094	<0.24
MXX 4	05/05/00	-1.0	-0.047	-0.047	-0.047	-0.12	-0.12	-0.22	.1.2	-0.002	-0.22
IVI W -4	03/03/09	<1.2	<0.047	<0.047	<0.047	<0.12	<0.12	<0.23	<1.2	<0.093	<0.23
MW-5	05/05/09	<14	<0.054	<0.054	<0.054	<0.14	<0.14	<0.27	<14	<0.11	<0.27
1111 5	05/05/07	51.1	<b>10.02</b>	(0.051	(0.051	\$0.11	\$0.11	(0.27	51.1	<b>KOITT</b>	(0.27
MW-6	05/05/09	<1.6	< 0.063	< 0.063	< 0.063	<0.16	<0.16	< 0.32	<1.6	<0.13	< 0.32
W7	05/05/09	<1.3	< 0.052	< 0.052	< 0.052	<0.13	<0.13	< 0.26	<1.3	<0.10	< 0.26
W-8R	05/05/09	<1.5	< 0.056	<0.056	< 0.056	< 0.15	<0.15	< 0.28	<1.5	<0.11	<0.28
W-9	05/05/09	<1.2	< 0.048	<0.048	<0.048	< 0.12	< 0.12	< 0.24	<1.2	<0.096	< 0.24
	0.510.510.0	1.2	0.047	0.047	0.047	0.10	0.10	0.01		0.004	0.04
W-10	05/05/09	<1.2	<0.047	<0.047	<0.047	<0.12	<0.12	<0.24	<1.2	<0.094	<0.24
W 11	05/05/00	<1.2	<0.040	~0.040	~0.040	<0.12	<0.12	<0.24	<12	<0.007	<0.24
VV-11	03/03/09	<1.3	<0.049	<0.049	<0.049	<0.15	<0.13	<0.24	<1.5	<0.097	<0.24
W-12	05/05/09	<1.4	< 0.054	<0.054	<0.054	<0.14	1.7	1.6	<1.4	2.6	<0.27

### TABLE A1B

### GROUNDWATER ANALYTICAL RESULTS - PAHs (µg/ℓ)

Pa	arameter	Acenaphthylene	Anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
NR 140 Er	nforcement										
Standard		No Std	3000	0.2	No Std	0.2	400	400	100	No Std	250
NR 140 Pr	eventive Action										
Limit		No Std	600	0.02	No Std	0.02	80	80	10	No Std	50
Location	Date Collected										
W-13	05/05/09	<1.4	< 0.056	< 0.056	< 0.056	< 0.14	<0.14	< 0.28	<1.4	<0.11	<0.28
W-14	05/05/09	<1.2	< 0.047	<0.047	< 0.047	<0.12	<0.12	<0.24	<1.2	< 0.094	<0.24
W-15	05/05/09	<1.2	< 0.048	<0.048	<0.048	<0.12	<0.12	< 0.24	<1.2	< 0.095	<0.24
W-16	05/05/09	<1.2	< 0.047	<0.047	<0.047	<0.12	<0.12	< 0.24	<1.2	<0.094	<0.24
	(1)										
W-17	05/5/09 (1)	2.8	0.084	0.12	0.075	0.27	0.89	0.29	11	0.81	0.81
	05/5/09 (2)	<2.5	3.1	< 0.049	< 0.049	<0.13	< 0.13	< 0.25	13	0.28	< 0.25
	04/28/10	2.7	< 0.051	< 0.051	< 0.051	< 0.13	<0.13	< 0.25	5.4	<0.10	< 0.25
	08/03/10	<1.3	< 0.049	< 0.049	< 0.049	< 0.13	<0.13	< 0.24	<1.3	< 0.097	< 0.24
	10/25/10	<2.5	< 0.049	< 0.049	< 0.049	<0.13	<0.13	< 0.25	<1.3	< 0.098	< 0.25
W-18	05/05/09	<1.2	< 0.048	<0.048	< 0.048	< 0.12	<0.12	< 0.24	<1.2	<0.096	< 0.24
	04/28/10	<1.3	< 0.051	< 0.051	< 0.051	<0.13	<0.13	< 0.25	<1.3	<0.10	< 0.25
	08/03/10	<1.3	< 0.051	< 0.051	< 0.051	<0.13	<0.13	< 0.25	<1.3	<0.10	< 0.25
	10/25/10	<1.3	< 0.052	< 0.052	< 0.052	<0.13	<0.13	< 0.26	<1.3	< 0.10	< 0.26
AMW-1	05/05/09	<1.2	< 0.047	< 0.047	< 0.047	< 0.12	<0.12	< 0.23	<1.2	< 0.093	< 0.23
AMW-2	05/5/09 (1)	<1.4	< 0.057	< 0.057	< 0.057	< 0.15	<0.15	<0.28	<1.5	<0.11	<0.28
	05/5/09 (2)	<1.4	< 0.054	<0.054	<0.054	<0.14	<0.14	<0.27	<1.4	<0.11	<0.27
AMW-3R	05/05/09	<1.3	< 0.050	< 0.050	< 0.050	< 0.13	<0.13	< 0.25	<1.3	< 0.099	< 0.25
## TABLE A1B

### GROUNDWATER ANALYTICAL RESULTS - PAHs (µg/ℓ)

Parameter NR 140 Enforcement		Acenaphthylene	Anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
NR 140 Er	nforcement										
Standard		No Std	3000	0.2	No Std	0.2	400	400	100	No Std	250
NR 140 Preventive Action											
Limit		No Std	600	0.02	No Std	0.02	80	80	10	No Std	50
Location	Date Collected										
AMW-4	05/5/09 (1)	1.5	< 0.057	< 0.057	< 0.057	<0.15	<0.15	< 0.28	<1.5	<0.11	< 0.28
	05/5/09 (2)	<1.4	< 0.054	< 0.054	< 0.054	<0.14	<0.14	< 0.27	<1.4	<0.11	< 0.27

## NOTES:

Only detected compounds are shown.

Concentrations shown in bold are above the NR 140 Enforcement Standard for that compound.

Concentrations shown in italic are above the NR 140 Preventative Action Limit for that compound.

NR 140 standards obtained from http://docs.legis.wisconsin.gov/code/admin\_code/nr/140.pdf on 01/09/2013.

## FOOTNOTES:

(1) The surrogate recovery percentage was outside acceptable limits on the initial run of this sample.

(2) The sample was re-run outside the holding time, but the surrogate recovery was within acceptable limits.

# Table 2

Historical Soil Quality Data Unocal Superior Terminal, Superior, Wisconsin

Location	Depth @ Below Grade (feet)	Date Collected	MTBE (µg/kg)	Benzene (µg/kg)	Toluene (μg/kg)	Ethyl- benzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5- Trimethy- benzene (μg/kg)	1,2,4- Trimethy- benzene (μg/kg)	Napthalene (µg/kg)	GRO (mg/kg)	DRO (mg/kg)
WIDNR R	esidual Petroleum	Product Levels		8,500	38,000	4,600	42,000	11,000	83,000	2,700		
WiDNR D	irect Contact Lev	els (0-4' bgs)		1,100	38,000	4,600	42,000	11,000	83,000	2,700		
GP-1 GP-1	6 31	19-Nov-96 20-Nov-96	<1600 <400	930.0 120.0	700.0 <50	2,900.0 <50	5,700.0 75.0	4,600.0 <50	10,000.0 93.0		320.0 <5	250.0 <12
GP-3	5	22-Nov-96	5,400.0	3,800.0	3,600.0	6,100.0	23,000.0	8,800.0	17,000.0		800.0	40.0
GP-4	7	23-Nov-96	<8000	4,200.0	3,300.0	6,700.0	11,000.0	4,900.0	19,000.0		980.0	<12
<b>GP-6</b> <b>G</b> P-6	6 16	5-Dec-96 3-Dec-96	<400	<50	 <50	<50	 <50	<50	 <50		 <5	<12
GP-6A	11	3-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<13
GP-7 GP-7	3 10	3-Dec-96 3-Dec-96	<400 <400	<50 <50	120.0 <50	360.0 <50	360.0 <50	250.0 <50	690.0 <50		73.0 <5	1,200.0 <12
GP-7A	8	4-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	19.0
GP-7B	11	4-Dec-96	<400	<50	<50	<50	<50	<50	<50	<u></u>	<5	<12
GP-7F	2	5-Dec-96	<400	<50	<50	66.0	850.0	1,900.0	2,700.0		210.0	630.0

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# Table 2Historical Soil Quality Data<br/>Unocal Superior Termiual, Superior, Wisconsin

Location WiDNR R	Depth @ Below Grade (feet) esidual Petroleum	Date Collected Product Levels	MTBE (µg/kg)	Benzene (µg/kg) 8,500	Toluene (μg/kg) 38,000	Ethyl- benzene (µg/kg) 4,600	Total Xylenes (µg/kg) 42.000	l,3,5- Trimethy- benzene (μg/kg) 11.000	l,2,4- Trimethy- benzene (μg/kg) 83,000	Napthalene (µg/kg) 2.700	GRO (mg/kg)	DRO (mg/kg)
WIDNR D	irect Contact Leve	els (0-4' bgs)		1,100	38,000	4,600	42,000	11,000	83,000	2,700		<del></del>
GP-7F	16	5-Dec-96	<8	<1	<1	<1	<1	<1	<1		6.2	<10
GP-8	8	5-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<12
GP-8A	9	21-Nov-96	<400	110.0	<50	<50	<50	<50	87,0	<b>10 10 10</b>	<5	<12
GP-9A	5	23-Nov-96	<8000	6,200.0	<1000	<b>8,</b> 900.0	47,000.0	14,000.0	34,000.0		2,100.0	1,100.0
GP-9B	7	23-Nov-96	<400	69.0	<50	<50	140.0	<50	160.0		<5	<10
TB-1	21	29-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<13
TB-2 TB-2	8 15	29-Dec-96 29-Dec-96	2,000.0 <400	1,100.0 400.0	1,200.0 280.0	1,600.0 150.0	4,800.0 280.0	720,0 <50	3,500.0 350.0	یند بیدیور میروی	160.0 <5	170.0 <15
TB-2A TB-2A	4 23	29-Dec-96 29-Dec-96	1,900.0 <400	1,500.0 <50	120.0 <50	2,900.0 <50	3,300.0 <50	1,900.0 <50	880.0 <50		240.0 <5	57.0 <14
TB-2B TB-2B	5 10	29-Dec-96 29-Dec-96	4,500.0 <400	1,800.0 400.0	1,200.0 280.0	3,800.0 150.0	9,900.0 280.0	2,300.0 <50	5,900.0 350.0		570.0 <5	110.0 <14

 Table 2
 Historical Soil Quality Data

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Unocal Superior Terminal, Superior, Wisconsin

Location WiDNR R WiDNR D	Depth @ Below Grade (feet) esidual Petroleum irect Contact Leve	Date Collected Product Levels :ls (0-4' bgs)	MTBE (µg/kg) 	Benzene (µg/kg) 8,500 1,100	Toluene (μg/kg) 38,000 38,000	Ethyl- benzene (µg/kg) 4,600 4,600	Total Xylenes (μg/kg) 42,000 42,000	1,3,5- Trimethy- benzene (μg/kg) 11,000 11,000	1,2,4- Trimethy- benzene (μg/kg) 83,000 83,000	Napthalene (μg/kg) 2,700 2,700	GRO (mg/kg) 	DRO (mg/kg) 
		· · · · · · · · · · · · · · · · · · ·		-								
TB-3 TB-3	8 28	29-Dec-96 29-Dec-96	<400 <400	1,200.0 <50	3,500.0 <50	850.0 <50	4,400.0 <50	490.0 <50	1,700.0 <50		24.0 <5	<13 <12
<b>TB</b> -4	15	29-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<14
TB-4A TB-4A	8 21	29-Dec-96 29-Dec-96	<400 <400	910.0 <50	<50 <50	1,200.0 <50	2,300.0 <50	670.0 <50	3,600.0 <50		120.0 <5	200.0 <13
TB-4B <b>T</b> B-4B	5 13	29-Dec-96 29-Dec-96	9,000.0 <400	9,600.0 <50	<b>39,000.0</b> <50	1 <b>5,</b> 000.0 <50	70,000.0 <50	10,000.0 <50	27,000.0 <50		2,500.0 <5	260.0 <14
TB-5	20	28-Dec-96	<400	190.0	<50	230.0	240.0	160.0	540.0		<5	<13
TB-5A	20	28-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<14
TB-6	22	28-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<12
TB-7 TB-7	8 31	28-Dec-96 28-Dec-96	<400 <400	<50 <50	<50 <50	<50 <50	<50 <50	<50 <50	<50 <50		<5 <5	<13 <13

# Table 2

Historical Soil Quality Data Unocal Superior Termiual, Superior, Wisconsin

Location	Depth @ Below Grade (feet)	Date Collected	MTBE (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl- benzene (µg/kg)	Total Xylenes (µg/kg)	l,3,5- Trimethy- benzene (μg/kg)	l,2,4- Trimethy- benzene (μg/kg)	Napthalene (µg/kg)	GRO (mg/kg)	DRO (mg/kg)
WIDNR R	esidual Petroleum	Product Levels		8,500	38,000	4,600	42,000	11,000	83,000	2,700		
WIDNR D	irect Contact Leve	els (0-4' bgs)		1,100	38,000	4,600	42,000	11,000	83,000	2,700		* <del>**</del> *
		·····										
W-8R	32	27-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<12
W-1 <b>4</b>	36	27-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<12
W-15	5	27-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<13
W-15	10	27-Dec-96	<400	<50	<50	<50	<50	<50	<50		<5	<12
ST-30A	23	29-Dec-96	<400	<50	<50	<50	<50	<50	<50	<del></del>	<5	<13
SPLP-1	~3-4	15-Apr-98	<25	<25	<25	<25	<50	42.0	<25	200.0	6.6	50.0
SPLP-2	~3-4	15-Apr-98	380.0	11,000.0	2,100.0	16,000.0	<b>53,200.</b> 0	11,000.0	35,000.0	16 <b>,00</b> 0.0	620.0	1,200.0
SPLP-3	~3-4	15-Apr-98	<25	390.0	240.0	270.0	681.0	190.0	570.0	170.0	17.0	6.1
SPLP-4	~3-4	15-Apr-98	<25	280.0	<25	280.0	490.0	320.0	<25	1,500.0	76.0	530.0
SPLP-5	~3-4	15-Apr-98	250.0	220.0	200.0	2,400.0	6,300.0	3,700.0	7,900.0	7,600.0	520.0	320.0

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Table 2Historical Soil Quality Data<br/>Unocal Superior Terminal, Superior, Wisconsin

Location	Depth @ Below Grade (feet)	Date Collected	MTBE (µg/kg)	Benzene (μg/kg)	Toluene (μg/kg)	Ethyl- benzene (µg/kg)	Total Xylenes (µg/kg)	l,3,5- Trimethy- benzene (μg/kg)	l,2,4- Trimethy- benzene (μg/kg)	Napthalene (µg/kg)	GRO (mg/kg)	DRO (mg/kg)
WiDNR R	esidual Petroleum	Product Levels		8,500	38,000	4,600	42,000	11,000	83,000	2,700		
WIDNR D	irect Contact Leve	els (0-4' bgs)		1,100	38,000	4,600	42,000	11,000	83,000	2,700		
SPLP-6	~3-4	15-Apr-98	410.0	380.0	1,600.0	4,100.0	20,200.0	5,500.0	14,000.0	<b>9,9</b> 00.0	780.0	550.0
SPLP-7	~3-4	15-Apr-98	2,200.0	6,000.0	19,000.0	10,000.0	71,000.0	1 <b>3,</b> 000.0	34,000.0	7 <b>,5</b> 00 <b>.</b> 0	1,200.0	93.0
SPLP-8	~3-4	15-Apr-98	220.0	170.0	920.0	2,200.0	10,200.0	3,200.0	7,800.0	6,400.0	470.0	120.0
SPLP-9	~3-4	15-Apr-98	<1000	<1000	14,000.0	21,000.0	<b>129,</b> 000.0	44,000.0	120,000.0	35,000.0	4,200.0	1,800.0
SPLP-10	~3-4	15-Apr-98	<100	<100	180.0	1,200.0	4,190.0	2,400.0	4,100.0	2,200.0	280.0	32.0
DC-1	2-3	14-Dec-99	<25	<25	55.0	<25	40.0	<25	<25			
DC-2	3-4	14-Dec-99	<2500	14,000.0	9,400.0	4 <b>,8</b> 00.0	49,000.0	57,000.0	29,000.0	<del>-</del>	***	
DC-3	3-4	14-Dec-99	<2500	<b>8,</b> 000.0	14,000.0	26,000.0	120,000.0	40,000.0	<b>91,</b> 000.0			
DC-4	3-4	14-Dec-99	<2500	9,700.0	13,000.0	2 <b>8,000.</b> 0	120,000.0	40,000.0	85,000.0			
DC-5	3-4	14-Dec-99	<250	<250	1,400.0	1,900.0	4,500.0	1,600.0	4,400.0			

Table 2Historical Soil Quality Data

Unocal Superior Terminal, Superior, Wisconsin

Location	Depth @ Below Grade (feet)	Date Collected	MTBE (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl- benzene (µg/kg)	Total Xylenes (µg/kg)	l,3,5- Trimethy- benzene (μg/kg)	l,2,4- Trimethy- benzene (μg/kg)	Napthalene (µg/kg)	GRO (mg/kg)	DRO (mg/kg)
WIDNR R	esidual Petroleum	Product Levels		8,500	38,000	4,600	42,000	11,000	83,000	2,700		
WIDNR D	irect Contact Leve	els (0-4' bgs)		1,100	38,000	4,600	42,000	11,000	83,000	2,700		
DC-6	3-4	14-Dec-99	<250	2,100.0	1,300.0	1,300.0	4,000.0	1,300.0	3,500.0			
DC-7	3-4	14-Dec-99	<25	<25	<25	<25	<25	<25	<25			<del>ان</del> ه چو <u>رن</u>
DC-8	3-4	14-Dec-99	<25	<25	36.0	<25	110.0	39.0	82.0			
DC-9	3-4	14-Dec-99	<25	<25	<25	<25	35.0	<25	35.0			
DC-10	3-4	14-Dec-99	<2500	17,000.0	36,000.0	12,000.0	<b>53,</b> 000.0	2 <b>3,</b> 000.0	48,000.0		<del></del>	
DC-11	3-4	14-Dec-99	<25	33.0	<25	38.0	58.0	40.0	110.0			
DC-12	3-4	14-Dec-99	<25	<25	<25	<25	<25	<25	<25		<u></u>	
DC-13	3-4	14-Dec-99	<250	690.0	570.0	1,000.0	990.0	610.0	1,500.0		<del></del>	
DC-14	3-4	14-Dec-99	<25	<25	<25	<25	180.0	410.0	<25			
DC-15	3-4	14-Dec-99	<25	<25	<25	<25	<25	26.0	36.0			

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# Table 2 Historical Soil Quality Data

Unocal Superior Terminal, Superior, Wisconsin

Location WiDNR Re WiDNR Dia	Depth @ Below Grade (feet) sidual Petroleum rect Contact Leve	Date Collected Product Levels els (0-4' bgs)	MTBE (μg/kg) 	Benzene (μg/kg) 8,500 1,100	Toluene (μg/kg) 38,000 38,000	Ethyl- benzene (μg/kg) 4,600 4,600	Total Xylenes (μg/kg) 42,000 42,000	1,3,5- Trimethy- benzene (μg/kg) 11,000 11,000	1,2,4- Trimethy- benzene (μg/kg) 83,000 83,000	Napthalene (μg/kg) 2,700 2,700	GRO (mg/kg) 	DRO (mg/kg) 
DC-16	3-4	14-Dec-99	560.0	6,000.0	3,700.0	2,400.0	20,000.0	26,000.0	12,000.0			
DC-17	3-4	14-Dec-99	<25	740.0	2,700.0	7 <b>,8</b> 00 <b>.0</b>	8,500.0	4,200.0	7,900.0			

Table 6.Excavation Confirmation Soil Characterization<br/>Unocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Petroleu	m Product Levels					8,500	38,000	4,600	42,000	11,000	83,000		
WDNR Direct Contact Le	evels (0-4 ft bgs)					1,100	38,000	4,600	42,000	11,000	83,000		
Area 4													
X-1	08-Jan-03	4	Floor	2.4	<470	<30	<59	<59	<120	<59	<59	<12	<4.2
X-2	08-Jan-03	4	Floor	2.4	<510	<32	<64	<64	<130	<64	<64	<13	<4.5
X-3	08-Jan-03	6	Floor	2.4	<500	,<31	<62	<62	<120	<62	<62	<12	<4.3
X-4	08-Jan-03	3	Wall	2.4	<460	<29	<57	<57	<110	<57	<57	<11	<4
X-5	08-Jan-03	3	Wall	2.4	<470	<29	<59	<59	<120	<59	<59	<12	<4.2
X-6	08-Jan-03	3	Wall	2.4	<520	<32	<64	<64	<130	<64	<64	<13	<4.5
X-7	08-Jan-03	3	Wall	2.4	<470	41	<58	<58	<120	<58	<58	<12	26
X-8	08-Jan-03	3	Wall	2.4	<470	<29	<59	<59	<120	<59	<59	<12	<4.2
<u>Area 8</u>													
Southern Excavation													
SP-1	09-Jan-03	3.5	Floor	2.5	<500	65	150	100	390	190	69	<12	<4.2
SP-2	09-Jan-03	3	Wall	1.5	<510	<32	<64	66	130	100	<64	<13	8.1
SP-3	09-Jan-03	3	Wall	0.7	<540	51	1,800	<67	110	85	<67	<13	<4.5

Table 6.Excavation Confirmation Soil CharacterizationUnocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Petrol	leum Product Levels					8,500	38,000	4,600	42,000	11,000	83,000		
WDNR Direct Contact	Levels (0-4 ft bgs)					1,100	38,000	4,600	42,000	11,000	83,000		
SP-4	09-Jan-03	3.5	Wall	1.0	<510	<32	<64	<64	<130	<64	<64	<13	<4.4
SP-5	09-Jan-03	3.5	Wall	0.9	<500	120	620	120	1,200	380	170	<12	<41
Northern Excavation													
E8F-1	09-Jan-03	7	Floor	6.1	<460	<29	<58	<58	<120	<58	<58	<12	<4
E8F-2	09-Jan-03	7	Floor	50.5	<470	<30	<59	<59	220	550	61	120	58
E8F-3	14-Jan-03	7	Floor	3.1	<500	<31	<62	<62	<120	<62	<62	<12	<4.1
E8F-4	17-Jan-03	8.5	Floor	35	<500	<31	<62	<62	<120	81	<62	<12	<4
E8F-5	27-Jan-03	8.5	Floor	34.9	<480	<30	<60	<60	<120	<60	<60	<12	<4.1
E8F-6	28-Jan-03	7	Floor	204	530	1,100	250	1,500	5,440	5,600	1,800	210	<4.2
E8F-7	28-Jan-03	7	Floor	126	<460	53	<58	<58	<120	<58	<58	<12	<3.9
E8F-8	19-Feb-03	10	Floor	11.8	<460	<29	<58	<58	<120	<58	<58	<12	<4
E8F-9	26-Feb-03	9	Floor	30.5	<470	<29	<59	<59	<120	<59	<59	<12	<4.1

Table 6.Excavation Confirmation Soil Characterization<br/>Unocal Superior Terminal, Superior, Wisconsin

Sample ID       Collected       (ft bgs)       ()       (ppm)       (ug/kg)       (ug/kg)	(mg/kg) 
WDNR Residual Petroleum Product Levels         8,500       38,000       4,600       42,000       11,000       83,000          WDNR Direct Contact Levels (0-4 ft bgs)         1,100       38,000       4,600       42,000       11,000       83,000	
WDNR Direct Contact Levels (0-4 ft bgs)         1,100       38,000       4,600       42,000       11,000       83,000	
E8W-1 28-Jan-03 3 Wall 1.8 <500 <31 <62 <62 <120 <62 <12	<4.3
E8W-2 28-Jan-03 3 Wall 1.8 <500 <31 <63 <63 <130 <63 <13	<4.2
E8W-3 28-Jan-03 3 Wall 335 <500 140 <63 780 2,290 4,900 2,200 220	<4.2
E8W-4 28-Jan-03 3 Wall 11.8 <470 <29 <58 <58 <120 <58 <58 <12	<4
E8W-5 26-Feb-03 3 Wall 0.6 <420 <26 <52 <52 <100 <52 <52 <10	<3.6
E8W-6 26-Feb-03 3 Wall 0.6 <480 <30 <61 <61 <120 <61 <12	<4.2
E8W-7 26-Feb-03 3 Wall 0.4 <460 <29 <57 <57 <110 <57 <57 <11	<4.1
E8W-8 26-Feb-03 3 Wall 1.3 <430 <27 <54 <54 <110 70 <54 <11	<3.9
E8W-9 26-Feb-03 3 Wall 1.1 <410 <26 <52 <52 780 3,600 <2,400 190	480
E8W-10 26-Feb-03 3 Wall 1.3 <390 <24 <48 <48 <97 <48 <48 <9.7	<3.4
E8W-11 26-Feb-03 2.5 Wall 1.0 <380 <24 <48 <48 <96 <48 <48 <9.6	<3.4
<u>Area 7 - Excavation</u> E7 2 28 Mar 02 7 Electr 4.3 (410 (25 (51 (100 (51 (51 (100	~ 2 8

Table 6.Excavation Confirmation Soil CharacterizationUnocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Petrole	um Product Levels					8,500	38,000	4,600	42,000	11,000	83,000		
WDNR Direct Contact L	evels (0-4 ft bgs)					1,100	38,000	4,600	42,000	11,000	83,000		
E7-3	28-Mar-03	4	Wall	0.0	<450	<28	<56	<56	<110	<56	<56	<11	<4.5
E7-4	28-Mar-03	4	Wall	26	<460	<29	<57	<57	134	200	100	<11	120
E7-5	28-Mar-03	4	Wall	4.3	<370	<23	<47	<47	<93	<47	<47	<9.3	<3.5
E7-6	28-Mar-03	2.5	Wall	4.3	<460	<29	<58	<58	<120	<58	<58	<12	<4.5
<u>Area 7b - Stormwater P</u>	ond Hand Augers												
E-7B	27-Mar-03	3	Grab	0.3	<400	<25	<50	<50	<99	<50	<50	<9.9	10
E7-1	27-Mar-03	1.5	Grab	0.0	<430	<27	<54	<54	201	<54	110	<11	<4.2
Area 3													
E3-1	06-Nov-03	3	Wall	55.0	<280	1,300	370	270	1,140	280	100	<7.1	<4.4
E3-2	06-Nov-03	3	Wall	6.4	<270	300	470	67	500	150	59	<6.8	<4.4
E3-3	06-Nov-03	3	Wall	0.9	<270	950	690	230	920	130	40	7.7	<4.3
E3-4	06-Nov-03	3	Wall	10.0	<250	290	250	<31	310	86	45	<6.2	5.5
E3-5	06-Nov-03	4	Floor	15.0	<280	600	41	270	1,350	950	290	10	5.8

Table 6.Excavation Confirmation Soil CharacterizationUnocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Pet	roleum Product Levels					8,500	38,000	4,600	42,000	11,000	83,000		
WDNR Direct Conta	ct Levels (0-4 ft bgs)					1,100	38,000	4,600	42,000	11,000	83,000		
E3-6	06-Nov-03	7	Floor	0.4	450	860	670	150	1,080	270	100	8	<4.4
E3-7	11-Nov-03	12	Floor			100	<34	<34	<34			13	13
E3-8	12-Dec-03	12	Floor	157.4	<530	1,200	3,700	670	3,400	1,100	330	1,900	<4.4
E3-9	12-Dec-03	12	Floor	159.9	<560	370	2,200	720	4,000	1,800	500	18	<4.6
E3-10	12-Dec-03	12	Floor	94.3	<550	1,900	4,900	940	4,700	1,800	510	26	<4.5
E3-11	12-Dec-03	8	Floor	107.0	<550	450	2,600	810	4,300	1,700	550	23	<4.5
E3-12	12-Dec-03	9	Floor	197.3	<520	100	660	410	2,000	1,400	440	15	<4.3
E3-13	12-Dec-03	4	Wall	0.2	<500	<31	<63	<63	<130	<63	<63	<13	4.6
E3-14	12-Dec-03	4	Wall	0.2	<510	<32	<63	<63	<130	<63	<63	<13	<4.3
E3-15	12-Dec-03	4	Wall	0.2	<520	<33	<65	<65	<130	<65	<65	<13	<4.4
E3-16	12-Dec-03	4	Wall	1.9	<560	<35	<70	<70	<140	<70	<70	<14	9.8
E3-17	12-Dec-03	4	Wall	103.3	<460	150	<58	280	930	520	160	<12	<4.2

Tabl	e 6.	Excavation Confirmation Soil Characterization
		Unocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)	
WDNR Residual Petro	oleum Product Levels					8,500	38,000	4,600	42,000	11,000	83,000			
WDNR Direct Contac	t Levels (0-4 ft bgs)					1,100	38,000	4,600	42,000	11,000	83,000			
E3-18	12-Dec-03	4	Wall	13.5	<500	<32	<63	<63	<130	<63	<63	<13	11	
E3-19	12-Dec-03	4	Wall	9.0	<500	<31	<63	<63	<130	200	76	<13	<4.4	
E3-20	12-Dec-03	4	Wall	192.4	<530	77	160	600	2,730	3,000	890	32	<4.5	
E3-21	12-Dec-03	4	Wall	774	<440	1,300	3,500	4,000	13,400	8,400	2,500	100	<4.5	
Notes:									g:\ı	nn0335\009\R	eports\Annual	\Tables\Exca	avations.xls	

1100001	
mg/kg	Milligrams per kilogram.
ug/kg	Micrograms per kilograms.
GRO	Gasoline Range Organics.
DRO	Diesel Range Organics.
MTBE	Methyl tert-butyl ether.

Feet below ground surface.

ft bgs PID Photoionization detector.

Parts per million. ppm

\*

Floor and wall sample locations are random grab samples.

# Table 3. Excavation Confirmation Soil Characterization Unocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)	
WDNR Residual Pe	stroieum Product Levels	***	***		terni m	8,500	38,000	4,600	42,000	11,000	83,000			
WDNR Direct Cont	act Levels (0-4 ft bgs)	****	920	4,45 M		1,100	38,000	4,600	42,000	11,000	83,000		<b></b>	
<u>Area 6</u> E6-WW1	08-Feb-05	4	Wall	1.0	<490	<31	<61	<61	<120	<61	<61	<12	<4.7	•
E6-WW2	08-Feb-05	2	Wall	0.8	<440	<28	<55	<55	<110	<55	<55	<11	<4.6	
E6-WW3	08-Feb-05	2	Wall	0.9	<530	<33	<66	<66	<130	<66	<66	<13	<5.2	
E6-WS1	08-Feb-05	4	Wall	0.9	<400	<25	<50	<50	<100	<50	<50	<10	<4.4	
E6-WS2	08-Feb-05	4	Wall	1.1	<430	<27	<53	<53	<110	<53	<53	<11	<4.5	
E6-WS3	08-Feb-05	4	Wall	1.3	<500	<31	<62	<62	<120	<62	<62	<12	<4.7	
E6-WN2	01-Feb-05	4	Wall	16.0	<490	<31	<61	<61	<120	<61	<61	<12	5.6	
E6-WN4	02-Feb-05	4	Wall	1.2	<460	<29	<57	<57	<110	<57	<57	<11	<4.3	
E6-WE1	02-Feb-05	4	Wall	6.7	<430	<27	<54	<54	<110	<54	<54	<11	<4.3	
E6-WE3	02-Feb-05	4	Wall	7.1	<500	<31	<62	<62	<120	<62	<62	<12	<4.5	

# Table 3.Excavation Confirmation Soil CharacterizationUnocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Petro	bleum Product Leveis	****		<b>17.19.19</b>	<b>2</b> 110	8,500	38,000	4,600	42,000	11,000	83,000	₩	
WDNR Direct Contac	t Levels (0-4 ft bgs)		mau			1,100	38,000	4,600	42,000	11,000	83,000	<b>W</b> to an	49 40 ar
E6-WE5	02-Feb-05	4	Wali	6.8	<460	<29	<58	<58	<120	<58	<58	<12	<4.5
E6-F1	01-Feb-05	6	Floor	1.5	<450	<28	<56	<56	<110	<56	<56	<11	<4.5
E6-F2	01-Feb-05	6	Floor	1.3	<510	<32	<64	<64	<130	<64	<64	<13	<4.8
<u>Area 5</u>													
E5-WE1	28-Feb-05	4	Wall	0.1	<420	<26	<53	<53	<110	<53	<53	<11	<3.2
E5-WE2	01-Mar-05	4	Wall	20.4	<430	140	140	250	730	950	490	28	<3.3
E5-WN1	28-Feb-05	4	Wall	0.1	<400	<25	<50	<50	<100	<50	<50	<10	<3.3
E5-WN2	28-Feb-05	4	Wall	0.1	<540	<34	<67	<67	<130	<67	<67	<13	3.7
E5-WN3	28-Feb-05	4	Wall	0.1	<390	<24	<49	<49	<97	<49	<49	<9.7	3.9
E5-WW1	28-Feb-05	4	Wall	0.1	<770	<48	<96	<96	<190	<96	<96	<19	<3
E5-WW2	28-Feb-05	4	Wall	0.1	<1100	<66	<130	<130	<260	<130	<130	<20	<3.4

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# Table 3. Excavation Confirmation Soil Characterization Unocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)	
WDNR Residual Petr	oleum Product Levels			****		8,500	38,000	4,600	42,000	11,000	83,000			
WDNR Direct Contac	t Levels (0-4 ft bgs)			to an an		1,100	38,000	4,600	42,000	11,000	83,000		<b>10 1</b> 00 100	
***************************************														
E5-WS1	28-Feb-05	4	Wall	0.1	<340	<22	<43	<43	<86	<43	<43	<8.6	8.5	
E5-WS2	28-Feb-05	4	Wall	0.1	<370	<23	<46	<46	<93	<46	<46	<9.3	<3.3	
E5-WS3	01-Mar-05	4	Wall	0.3	<420	<26	<52	<52	<100	<52	<52	<10	<3.2	
E5-F1	01-Mar-05	13	Floor	0.1	<440	<28	<56	<56	160	200	96	13	13	
E5-F2	01-Mar-05	13	Floor	0.3	<420	75	<53	280	290	340	110	11	3.3	
E5-F3	01-Mar-05	13	Floor	0.2	<440	<28	<55	<55	<110	<55	<55	<11	<3.1	
E5-F4	01-Mar-05	13	Floor	0.1	<410	<26	<51	<51	<100	<51	<51	<10	<3.3	
E5-F5	01-Mar-05	13	Floor	9.8	<380	110	<47	110	190	320	150	12	4.3	
E5(2)-WE1	28-Feb-05	4	Wall	0.1	<410	<26	<51	<51	<100	<51	<51	<10	<3.4	
E5(2)-WN1	28-Feb-05	4	Wall	0.1	<410	<26	<52	<52	<100	<52	<52	<10	<3.3	

# Table 3. Excavation Confirmation Soil Characterization Unocal Superior Terminal, Superior, Wisconsin

Sample ID	Date Collected	Depth (ft bgs)	Sample Location* ()	PID Reading (ppm)	MTBE (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl- benzene (ug/kg)	Total Xylenes (ug/kg)	1,2,4- Trimethy- benzene (ug/kg)	1,3,5- Trimethy- benzene (ug/kg)	GRO (mg/kg)	DRO (mg/kg)
WDNR Residual Petro	eleum Product Levels	<b>奈相坐</b>	D TH	799 ANI 402	<b>अके जुल्ल</b> ाम्	8,500	38,000	4,600	42,000	11,000	83,000	-	
WDNR Direct Contact	Levels (0-4 ft bgs)	<b>107 477 48</b> 6		40 mm		1,100	38,000	4,600	42,000	11,000	83,000	-	***
E5(2)-WS1	28-Feb-05	4	Wall	0.1	<410	<26	<51	<51	<100	<51	<51	<10	<3.2
E5(2)-WW1	28-Feb-05	4	Wall	0.1	<420	<26	<52	<52	<100	<52	<52	<10	<3.4
E5(2)-F1	28-Feb-05	11	Floor	2.3	<400	<25	<50	<50	<100	<50	<50	<10	<3.3
E5(2)-F2	28-Feb-05	11	Floor	0.2	<450	<28	<56	<56	<110	<56	<56	<11	<3.2

Table A.3

#### **RESIDUAL SOIL CONTAMINATION - AREA 1**

Analytes	C2-4 (0-1') Oct. 2011	C2-5 (0-1') May 2012	C2-6 (0-1') July 2012	C3-3 (3-4') Aug. 2011	C3-4 (3-4') Oct. 2011	C3-5 (3-4') May 2012	C3-6 (3-4') July 2012	WI DNR D-C RCL or Guidance Concentrations
PAHs								
Benzo(a)anthracene				0.56	< 0.29	1.20	2.2	2.11
Benzo(a)pyrene	0.82	2.7	0.16	0.39	0.85	0.48	0.30	0.39 (1)
Benzo(b)fluoranthene	0.25	2.1	0.2					2.11

Analytes	C5-4 (1-2') Oct. 2011	C5-5 (1-2') May 2012	C5-6 (1-2') July 2012	C6-3 (3-4') Aug. 2011	C6-4 (3-4') Oct. 2011	C6-5 (3-4') May 2012	C6-6 (3-4') July 2012	WI DNR D-C RCL or Guidance Concentrations
PAHs								
Benzo(a)anthracene	0.51	0.81	< 0.14	1.3	1.2	2.7	3.1	2.11
Benzo(a)pyrene	0.84	< 0.30	< 0.14	0.61	1.20	0.34	0.37	0.39 (1)

Analytes	C7-4 (1-2') Oct. 2011	C7-5 (1-2') May 2012	C7-6 (1-2') July 2012	C8-3 (0-1') Aug. 2011	C8-4 (0-1') Oct. 2011	C8-5 (0-1') May 2012	C8-6 (0-1') July. 2012	WI DNR D-C RCL or Guidance Concentrations
PAHs								
Benzo(a)anthracene	0.88	4.4	2.4	2.3	0.14	< 0.27	0.30	2.11
Benzo(a)pyrene	0.47	< 0.28	0.23	0.64	0.15	< 0.27	0.20	0.39 (1)
Naphthalene	<2.8	<2.8	<1.5	36	< 0.55	<2.7	<1.3	26

NOTES:

NS = No standard for this compound.

D-C RCL = Direct Contact Residual Contaminant Level

Results reported in units of milligrams per kilogram (mg/kg) on a dry weight basis.

or interim guidance concentrations.

NR 720 Wis. Adm. Code RCLs, obtained from

http://dnr.wi.gov/topic/Brownfields/documents/tech/RCLs0115.

above mentioned RCL Soil Worksheet.

FOOTNOTES:

(1) PAH RCLs are interim guidance concentrations for direct contact at industrial sites (Publication RR-519-97, April 1997 corrected).

# TABLE A4

	Sample No. (depth) and Date													
Analytes	C1-1 (2-3') Oct. 2010	C1-2 (2-3') May 2011	C1-3 (2-3') Aug. 2011	C1-4 (2-3') Oct. 2011	C1-5 (2-3') May 2012	C1-6 (2-3') July 2012	C2-1 (0-1') Oct. 2010	C2-2 (0-1') May 2011	C2-3 (0-1') Aug. 2011	C2-4 (0-1') Oct. 2011	C2-5 (0-1') May 2012	C2-6 (0-1') July 2012	WDNR Regulatory Limitations or Guidance Concentrations	
PVOCs														
Benzene	2.5	1.2	2.8	1.3	0.36	0.36	1.1	1.3	5.1	0.56	< 0.055	0.48	1.1 <sup>(1)</sup> / 8.5 <sup>(2)</sup>	
Toluene	1.8	0.99	1.8	1.2	0.48	0.24	1.0	1.7	2.8	0.7	0.8	0.6	38 (2)	
Ethylbenzene	6.1	2.2	8.3	2.3	0.57	0.63	3.0	4.1	11	0.84	0.95	1.00	4.6 <sup>(2)</sup>	
T. Xylenes	28	11	37	11	2.7	3.3	15	25	32	3.3	3.9	4.1	42 <sup>(2)</sup>	
Methyl tert-butyl ether	< 0.29	< 0.27	< 0.25	<0.26	< 0.23	< 0.23	< 0.25	<0.27	<0.26	< 0.23	<0.44	< 0.24	NS	
1,3,5-TMB	9.7	10	16	4.7	0.33	2.8	8.2	16	24	0.91	1.3	4.4	11 (2)	
1.2.4-TMB	25	18	39	12	1.1	4.4	20	38	45	2.6	2.7	9.1	83 (2)	
PAHs														
Acenaphthene	<1.2	<1.2	<5.7	<5.8	<6.0	<2.7	1.4	<1.1	<5.4	<5.1	<5.3	<2.7	60,000 <sup>(3)</sup>	
Acenaphthylene	0.76	<0.61	21	<2.9	<3.0	<1.4	1.6	<0.58	17	10	24	<1.4	360 (3)	
Anthracene	0.38	1.3	0.88	0.46	< 0.30	<0.14	1.4	0.48	0.61	0.24	2.5	0.47	300,000 <sup>(3)</sup>	
Benzo(a)anthracene	0.44	< 0.061	0.90	0.38	< 0.30	0.23	1.9	< 0.058	0.48	0.46	3.8	1.6	3.9 <sup>(3)</sup>	
Benzo(a)pyrene	0.35	0.25	<0.29	0.29	< 0.30	<0.14	1.6	< 0.058	0.27	0.82	2.7	0.16	0.39 (3)	
Benzo(b)fluoranthene	0.29	0.21	0.18	0.17	< 0.30	<0.14	1.5	< 0.023	<0.11	0.25	2.1	0.2	3.9 <sup>(3)</sup>	
Benzo(g,h,i)perylene	0.68	0.35	<0.46	<0.46	<0.49	0.24	1.9	0.49	<0.44	0.5	1.5	0.54	39 <sup>(3)</sup>	
Benzo(k)fluoranthene	0.11	< 0.025	<0.12	<0.12	< 0.30	< 0.14	0.72	< 0.023	<0.11	0.12	1.3	<0.14	39 <sup>(3)</sup>	
Chrysene	0.52	< 0.061	0.68	0.36	< 0.30	< 0.14	1.9	<0.058	2.3	0.52	3	< 0.14	390 <sup>(3)</sup>	
Dibenz(a,h)anthracene	1.8	< 0.24	<1.2	<1.2	<1.2	< 0.55	2.6	<0.23	<1.1	<1.0	<1.1	< 0.54	0.39 (3)	
Fluoranthene	1.6	1.9	< 0.29	2.1	0.77	0.84	5.9	2.2	< 0.27	1.2	9	1.8	40,000 (3)	
Fluorene	0.74	1.4	3.4	<0.58	<0.60	< 0.27	2.6	1.1	1.8	< 0.51	2.3	0.53	40,000 (3)	
Indeno(1,2,3-cd)pyrene	< 0.059	< 0.061	<0.29	<0.29	< 0.30	< 0.14	0.22	0.068	< 0.27	<0.26	1.4	< 0.14	3.9 <sup>(3)</sup>	
Naphthalene	3.8	5.3	29	<2.9	<3.0	<1.4	5.9	1.1	12	<2.6	25	1.5	2.7 <sup>(2)</sup> /110 <sup>(3)</sup>	
Phenanthrene	2.3	4.5	6.8	<0.23	0.38	0.42	8.8	4.1	4.4	1.3	7.3	1.2	390 (3)	
Pyrene	1.3	<0.12	< 0.57	2.1	< 0.60	0.56	4.3	<0.11	< 0.54	1.2	4.7	< 0.27	30,000 <sup>(3)</sup>	

		Sample No. (depth) and Date											
Analytes	C3-1 (3-4') Oct. 2010	C3-2 (3-4') May 2011	C3-3 (3-4') Aug. 2011	C3-4 (3-4') Oct. 2011	C3-5 (3-4') May 2012	C3-6 (3-4') July 2012	C4-1 (2-3') Oct. 2010	C4-2 (2-3') May 2011	C4-3 (2-3') Aug. 2011	C4-4 (2-3') Oct. 2011	C4-5 (2-3') May 2012	C4-6 (2-3') July 2012	WDNR Regulatory Limitations or Guidance Concentrations
PVOCs													
Benzene	1.1	1.8	0.30	0.83	0.41	0.40	0.59	0.67	0.44	0.32	0.36	0.56	1.1 <sup>(1)</sup> / 8.5 <sup>(2)</sup>
Toluene	0.98	2.2	0.30	0.72	0.47	0.55	0.39	0.80	0.42	0.26	0.34	0.57	38 (2)
Ethylbenzene	1.9	4.1	1.2	2.8	0.52	0.67	2.0	0.96	0.99	1.90	0.57	0.59	4.6 <sup>(2)</sup>
T. Xylenes	8.6	19	5.5	12	2.3	3.2	8.7	3.9	4.3	7.8	2.4	2.6	42 <sup>(2)</sup>
Methyl tert-butyl ether	< 0.56	<0.29	< 0.25	< 0.26	< 0.26	< 0.22	< 0.39	< 0.35	<0.28	< 0.25	< 0.26	< 0.29	NS
1,3,5-TMB	4.1	9.5	4.5	6.6	0.26	1.2	4.3	7.3	2.7	8.1	0.4	< 0.29	11 <sup>(2)</sup>
1.2.4-TMB	8.6	24	11	17	0.88	2.6	12	3.7	5.8	18.0	1.4	0.9	83 <sup>(2)</sup>
PAHs													
Acenaphthene	<1.2	<6.6	<5.4	<5.8	<6.0	<2.7	< 0.72	<1.2	<6.3	<1.1	<6.2	<3.2	60,000 <sup>(3)</sup>
Acenaphthylene	0.8	<3.3	<2.7	<2.9	<3.1	<1.4	< 0.37	< 0.62	6.1	< 0.57	<3.1	<1.6	360 (3)
Anthracene	0.64	0.53	0.59	0.66	< 0.31	0.58	0.16	0.08	0.24	0.83	< 0.31	<0.16	300,000 <sup>(3)</sup>
Benzo(a)anthracene	1.0	0.93	0.56	<0.29	1.20	2.2	0.21	0.22	0.41	< 0.057	1.3	1.5	3.9 <sup>(3)</sup>
Benzo(a)pyrene	0.97	0.45	0.39	0.85	0.48	0.30	0.16	0.12	< 0.32	0.15	< 0.31	<0.16	0.39 (3)
Benzo(b)fluoranthene	0.83	0.31	0.19	0.26	0.37	0.38	0.15	0.11	<0.13	0.09	< 0.31	<0.16	3.9 <sup>(3)</sup>
Benzo(g,h,i)perylene	1.8	< 0.53	<0.43	<0.47	0.54	0.72	0.13	0.25	<0.51	<0.090	< 0.50	0.42	39 <sup>(3)</sup>
Benzo(k)fluoranthene	0.33	<0.14	<0.11	<0.12	<0.31	0.32	0.076	0.05	<0.13	0.05	< 0.31	<0.16	39 <sup>(3)</sup>
Chrysene	1.3	0.68	0.53	0.99	< 0.31	<0.14	0.21	0.18	< 0.32	0.24	1.60	<0.16	390 <sup>(3)</sup>
Dibenz(a,h)anthracene	4.5	<1.3	<1.1	<1.2	<1.2	< 0.54	0.18	< 0.25	<1.3	< 0.23	<1.2	<0.64	0.39 (3)
Fluoranthene	3.5	2.2	< 0.27	<0.29	2.90	2.20	0.9	0.45	0.98	< 0.057	2.30	<0.16	40,000 (3)
Fluorene	1.7	1.7	2.2	3.1	<0.60	0.6	0.64	0.22	2.0	0.74	< 0.62	< 0.32	40,000 (3)
Indeno(1,2,3-cd)pyrene	< 0.059	< 0.33	< 0.27	0.29	< 0.31	0.15	0.089	0.07	< 0.32	0.07	< 0.31	<0.16	3.9 (3)
Naphthalene	4.7	4.1	14	16	<3.1	<1.4	1.4	<0.62	<3.2	9.10	<3.1	<1.6	2.7 <sup>(2)</sup> /110 <sup>(3)</sup>
Phenanthrene	5.1	5.5	6.0	6.7	0.9	1.1	2.0	0.66	3.40	2.40	0.82	0.55	390 <sup>(3)</sup>
Pyrene	3.0	<0.66	3.4	<0.58	<0.60	<0.27	0.49	<0.12	<0.63	0.60	<0.62	< 0.32	30,000 <sup>(3)</sup>

	Sample No. (depth) and Date												
Analytes	C5-1 (1-2') Oct. 2010	C5-2 (1-2') May 2011	C5-3 (1-2') Aug. 2011	C5-4 (1-2') Oct. 2011	C5-5 (1-2') May 2012	C5-6 (1-2') July 2012	C6-1 (3-4') Oct. 2010	C6-2 (3-4') May 2011	C6-3 (3-4') Aug. 2011	C6-4 (3-4') Oct. 2011	C6-5 (3-4') May 2012	C6-6 (3-4') July 2012	WDNR Regulatory Limitations or Guidance Concentrations
PVOCs													
Benzene	3.2	0.98	1.0	0.51	0.79	0.24	1.8	1.2	1.3	1.8	0.7	0.4	1.1 <sup>(1)</sup> / 8.5 <sup>(2)</sup>
Toluene	1.3	0.72	0.57	0.68	0.38	0.20	0.72	0.69	0.91	4.0	0.5	0.4	38 (2)
Ethylbenzene	6.6	1.3	5.5	0.90	1.50	0.49	5.0	5.30	2.8	2.3	2.2	1.9	4.6 (2)
T. Xylenes	24	5.3	21	3.9	7.5	2.4	22	25	13	12	12	11	42 <sup>(2)</sup>
Methyl tert-butyl ether	< 0.52	< 0.34	<0.27	< 0.24	<0.46	<0.19	<0.96	< 0.27	<0.23	<0.22	<0.89	<0.23	NS
1,3,5-TMB	6.3	2.0	11	1.2	5.1	1.3	12	12	5.2	4.8	10	7	11 (2)
1.2.4-TMB	19	3.5	29	3.2	9.5	3.0	31	36	14	11	23	17	83 <sup>(2)</sup>
PAHs													
Acenaphthene	<1.2	<1.3	<5.9	<5.2	<5.8	<2.7	<1.1	<5.7	<5.6	<5.2	<5.6	<2.8	60,000 <sup>(3)</sup>
Acenaphthylene	2.1	< 0.65	15	14	<3.0	<1.4	4.5	5.1	20	<2.6	<2.8	<1.4	360 (3)
Anthracene	0.65	0.23	0.51	1.80	< 0.30	< 0.14	0.63	0.64	1.0	0.7	0.7	0.9	300,000 <sup>(3)</sup>
Benzo(a)anthracene	0.56	< 0.065	0.71	0.51	0.81	<0.14	0.63	1.1	1.3	1.2	2.7	3.1	3.9 <sup>(3)</sup>
Benzo(a)pyrene	0.43	0.25	< 0.30	0.84	< 0.30	<0.14	0.47	0.41	0.61	1.20	0.34	0.37	0.39 (3)
Benzo(b)fluoranthene	0.33	0.17	<0.12	0.15	< 0.30	<0.14	0.38	0.30	0.28	0.46	<0.28	0.27	3.9 <sup>(3)</sup>
Benzo(g,h,i)perylene	0.85	0.21	<0.48	<0.42	<0.47	0.41	0.89	0.46	0.52	0.87	<0.45	0.46	39 <sup>(3)</sup>
Benzo(k)fluoranthene	0.13	< 0.026	<0.12	<0.11	< 0.30	<0.14	0.15	0.15	<0.12	<0.11	< 0.28	0.36	39 <sup>(3)</sup>
Chrysene	0.63	< 0.065	0.60	0.45	1.50	<0.14	0.75	0.83	1.90	1.3	< 0.28	0.3	390 <sup>(3)</sup>
Dibenz(a,h)anthracene	2.2	<0.26	<1.2	<1.0	<1.2	< 0.55	2.2	<1.2	<1.1	<1.0	<1.1	< 0.56	0.39 (3)
Fluoranthene	3.2	1.2	< 0.30	0.4	2.6	< 0.14	3.3	0.63	<0.29	<0.26	6.3	<0.28	40,000 (3)
Fluorene	2.7	0.77	5.1	2.9	<0.58	< 0.27	2.6	2.9	4.5	1.9	1.5	1.2	40,000 (3)
Indeno(1,2,3-cd)pyrene	<0.061	< 0.065	< 0.30	< 0.26	< 0.30	<0.14	0.087	<0.29	<0.29	0.35	<0.28	0.23	3.9 (3)
Naphthalene	4.1	1.8	18	16	<3.0	<1.4	5.3	4.7	24	22	<2.8	2	2.7 (2)/110 (3)
Phenanthrene	9.0	2.8	9.1	5.2	0.92	0.57	8.9	1.9	12	5	3	2	390 <sup>(3)</sup>
Pyrene	1.4	<0.13	<0.59	< 0.52	<0.58	<0.27	1.7	<0.57	<0.56	<0.52	<0.56	<0.28	30,000 <sup>(3)</sup>

		Sample No. (depth) and Date											
Analytes	C7-1 (1-2') Oct. 2010	C7-2 (1-2') May 2011	C7-3 (1-2') Aug. 2011	C7-4 (1-2') Oct. 2011	C7-5 (1-2') May 2012	C7-6 (1-2') July 2012	C8-1 (0-1') Oct. 2010	C8-2 (0-1') May 2011	C8-3 (0-1') Aug. 2011	C8-4 (0-1') Oct. 2011	C8-5 (0-1') May 2012	C8-6 (0-1') July. 2012	WDNR Regulatory Limitations or Guidance Concentrations
PVOCs													
Benzene	2.4	12	1.4	1.3	0.78	0.51	1.6	< 0.028	0.92	0.54	0.074	0.160	$1.1^{(1)}/8.5^{(2)}$
Toluene	1.9	14	1.4	2.3	0.97	0.66	1.4	0.095	1.0	0.42	0.073	0.220	38 <sup>(2)</sup>
Ethylbenzene	8.4	21	3.3	2.4	0.98	0.73	12	0.54	1.1	0.86	0.22	0.27	4.6 <sup>(2)</sup>
T. Xylenes	40	88	15	11	4.4	3.2	54	1.9	4.4	3.8	0.70	1.10	42 <sup>(2)</sup>
Methyl tert-butyl ether	<2.4	<2.5	<0.24	<0.26	<0.41	<0.26	<3.2	< 0.23	< 0.25	< 0.21	<0.47	<0.22	NS
1,3,5-TMB	16	80	12	7	0.79	1.90	25	1.8	2.9	3.9	<0.47	0.4	11 <sup>(2)</sup>
1.2.4-TMB	47	81	20	12	2.2	3.9	77	3.9	6.0	8.9	0.49	0.64	83 <sup>(2)</sup>
PAHs													
Acenaphthene	<1.2	<5.6	<5.6	<5.5	<5.5	<2.9	<1.2	<1.1	<5.7	<1.1	<5.4	<2.7	60,000 <sup>(3)</sup>
Acenaphthylene	3.6	<2.8	<2.9	26	<2.8	<1.5	3.9	< 0.54	28	< 0.55	<2.7	<1.3	360 <sup>(3)</sup>
Anthracene	1.0	0.74	0.77	0.52	0.45	< 0.15	0.58	0.19	1.6	0.22	< 0.27	<0.13	300,000 <sup>(3)</sup>
Benzo(a)anthracene	1.3	0.99	0.88	0.88	4.4	2.4	0.65	0.42	2.3	0.14	< 0.27	0.30	3.9 <sup>(3)</sup>
Benzo(a)pyrene	1.2	0.31	<0.29	0.47	<0.28	0.23	0.45	0.20	0.64	0.15	< 0.27	0.20	0.39 (3)
Benzo(b)fluoranthene	0.97	0.20	0.13	0.18	<0.28	0.19	0.38	0.17	0.50	0.10	<0.27	0.19	3.9 <sup>(3)</sup>
Benzo(g,h,i)perylene	1.2	<0.45	<0.45	<0.44	<0.45	0.35	0.57	0.38	0.75	< 0.087	<0.43	0.30	39 <sup>(3)</sup>
Benzo(k)fluoranthene	0.47	<0.12	<0.12	<0.11	<0.28	<0.15	0.19	< 0.022	<0.12	0.046	< 0.27	<0.13	39 <sup>(3)</sup>
Chrysene	1.6	0.72	0.86	0.61	0.30	< 0.15	0.68	< 0.054	4.3	0.16	< 0.27	<0.13	390 <sup>(3)</sup>
Dibenz(a,h)anthracene	1.6	<1.1	<1.1	<1.1	<1.1	< 0.59	1.1	0.42	<1.1	< 0.22	<1.1	<0.54	0.39 (3)
Fluoranthene	5.2	0.65	<0.29	< 0.28	5	1.6	3.2	0.70	<0.29	0.16	1.5	0.6	40,000 (3)
Fluorene	3.3	3.3	4.3	2.5	< 0.55	< 0.29	2.3	0.29	3.1	<0.11	< 0.54	< 0.27	40,000 (3)
Indeno(1,2,3-cd)pyrene	0.67	<0.28	<0.29	<0.28	<0.28	< 0.15	0.21	< 0.054	0.29	0.071	<0.27	<0.13	3.9 <sup>(3)</sup>
Naphthalene	10	7.0	20	<2.8	<2.8	<1.5	7.6	< 0.54	36	< 0.55	<2.7	<1.3	2.7 <sup>(2)</sup> /110 <sup>(3)</sup>
Phenanthrene	10	2.20	11	5.3	1.4	0.8	5.8	1.1	16	0.55	0.45	0.30	390 <sup>(3)</sup>
Pyrene	3.0	<0.56	< 0.56	< 0.55	< 0.55	<0.29	1.5	<0.11	< 0.57	<0.11	< 0.54	0.46	30,000 <sup>(3)</sup>

# PRE AND POST REMAINING SOIL CONTAMINATION SOIL ANALYTICAL RESULTS - AREA 1

Sample No. (depth) and Date										
Analytes	C9-1 (2-3') Oct. 2010	C9-2 (2-3') May 2011	C9-3 (2-3') Aug. 2011	C9-4 (2-3') Oct. 2011	C9-5 (2-3') May 2012	C9-6 (2-3') July 2012	Regulatory Limitations or Guidance Concentrations			
PVOCs										
Benzene	0.27	0.05	0.31	0.15	0.25	0.16	$1.1^{(1)}$ / $8.5^{(2)}$			
Toluene	0.2	0.09	0.19	0.15	0.16	0.13	38 (2)			
Ethylbenzene	1.3	0.13	0.75	0.38	0.46	0.26	4.6 (2)			
T. Xylenes	3.9	0.52	2.30	1.3	1.7	1.0	42 <sup>(2)</sup>			
Methyl tert-butyl ether	< 0.21	< 0.21	< 0.25	< 0.20	< 0.24	< 0.24	NS			
1,3,5-TMB	1.6	0.54	1.20	0.81	0.98	0.38	11 <sup>(2)</sup>			
1.2.4-TMB	5.2	0.73	3.50	2.0	2.1	1.0	83 <sup>(2)</sup>			
PAHs										
Acenaphthene	< 0.53	<1.0	<5.8	<0.97	<5.7	<2.9	60,000 <sup>(3)</sup>			
Acenaphthylene	< 0.27	<0.50	6.9	<0.49	<2.9	<1.5	360 (3)			
Anthracene	0.054	0.07	0.18	0.039	<0.29	<0.15	300,000 <sup>(3)</sup>			
Benzo(a)anthracene	0.091	0.18	0.45	0.14	<0.29	<0.15	3.9 <sup>(3)</sup>			
Benzo(a)pyrene	0.11	0.15	<0.29	0.23	<0.29	<0.15	0.39 (3)			
Benzo(b)fluoranthene	0.1	0.12	0.13	0.12	<0.29	<0.15	3.9 <sup>(3)</sup>			
Benzo(g,h,i)perylene	0.22	0.28	<0.47	0.20	<0.46	1.30	39 <sup>(3)</sup>			
Benzo(k)fluoranthene	0.048	< 0.020	<0.12	0.054	<0.29	,0.15	39 <sup>(3)</sup>			
Chrysene	0.1	0.20	3.3	0.16	<0.29	<0.15	390 <sup>(3)</sup>			
Dibenz(a,h)anthracene	0.42	<0.20	<1.2	<0.20	<1.2	<0.59	0.39 (3)			
Fluoranthene	0.25	0.34	1.3	0.27	1.40	0.79	40,000 (3)			
Fluorene	0.078	<0.10	<0.58	< 0.097	<0.57	<0.29	40,000 (3)			
Indeno(1,2,3-cd)pyrene	0.048	0.08	<0.29	0.085	<0.29	0.260	3.9 <sup>(3)</sup>			
Naphthalene	0.36	< 0.50	<2.9	<0.49	<2.9	<1.5	2.7 <sup>(2)</sup> /110 <sup>(3)</sup>			
Phenanthrene	0.28	0.22	1.7	0.20	0.57	0.44	390 <sup>(3)</sup>			
Pyrene	0.2	<0.10	<0.58	0.26	< 0.57	<0.29	30,000 <sup>(3)</sup>			

# NOTES:

Results reported in units of milligrams per kilogram (mg/kg) on a dry weight basis.

Concentrations shown in bold are above their respective industrial direct contact RCL.

Since visual observations have confirmed that there is no free product in soil in Area 1, analytical results for compounds with NR 746 Table 1 concentrations were only compared to the interim guidance concentrations for direct contact.

NS = No standard for this compound.

NC = No concentration.

FOOTNOTES:

(1) NR 746 RCL for direct contact (September 2007 version).

(2) NR 746 Table 1 concentration indicating possible presence of free product (February 2012 version).

(3) PAH RCLs are interim guidance concentrations for direct contact at industrial sites (Publication RR-519-97, April 1997 corrected).

#### TABLE A4

#### PRE AND POST REMAINING SOIL CONTAMINATION SOIL ANALYTICAL RESULTS - AREA 2

				Par	ameters		
Sample I.D.	Benzene	Ethylbenzene	Methyl tert butyl ether	Toluene	1,2,4- Trimethylbenzene	1,3,5- Trimethylbenzene	Xylenes
1 (0-2')	0.12	0.5	< 0.10	< 0.025	1.7	0.49	2
8 (2-4')	0.22	< 0.025	<0.10	< 0.025	<0.10	<0.10	0.10
14 (2-4')	0.25	0.089	< 0.098	< 0.024	<0.098	0.16	0.16
15 (0-2')	0.16	< 0.027	<0.11	< 0.027	<0.11	<0.11	< 0.054
15 (2-4')	1.0	0.44	<0.10	< 0.025	0.24	0.84	0.56
16 (0-2')	0.075	< 0.026	<0.10	0.065	<0.10	<0.10	0.072
16 (2-4')	0.57	1.8	<0.11	0.20	4.2	2.5	2.8
26 (2-4')	<u>1.5</u>	7.3	< 0.12	0.47	23	8.9	14
27 (0-2')	0.082	0.39	<0.10	0.052	1.2	0.47	0.76
28 (0-2')	0.1	0.11	<0.13	0.19	0.31	<0.13	0.61
30 (2-4')	0.065	1.3	<0.11	0.11	19	9.3	7.5
WDNR Proposed Industrial							
Direct Contact Level (1)	7.41	37	293	818	219	182	258
NR 746 Direct Contact Standards <sup>(2)</sup>	1.1	4.6	ns	38	83	11	42
NR 720 RCL <sup>(3)</sup>	0.0055	2.9	ns	1.5	ns	ns	4.1

#### NOTES:

Samples collected on July 8 & 9, 2008. All concentrations are in mg/kg (ppm) on a dry-weight basis. Results in bold are above the NR 720 RCL. Result underlined are above the current NR 746 Direct Contact Standard. ns = No standard

#### FOOTNOTES:

(1) WDNR, Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator (Draft version
 (2) NR 746.06 Tables 1 and 2, obtained from http://docs.legis.wisconsin.gov/code/admin\_code/nr/746.pdf#page=4 on 12/28/2012.
 (3) NR 720 Residual Contaminant Level (RCL), obtained from http://docs.legis.wisconsin.gov/code/admin\_code/nr/720.pdf on 12/28/2012.

#### TABLE A4

#### PRE AND POST REMAINING SOIL CONTAMINATION SOIL ANALYTICAL RESULTS - AREAS 3-8

Area I.D.		Parameters										
	Sample I.D.	Sample Depth (ft bgs)	Sample Date	Benzene	Ethylbenzene	Methyl tert butyl ether	Toluene	1,2,4-Trimethylbenzene	1,3,5- Trimethylbenzene	Xylenes	GRO	DRO
Area 3	E3-1	3	11/06/03	<u>1.3</u>	0.27	< 0.28	0.37	0.28	0.1	1.1	<7.1	<4.4
	E3-2	3	11/06/03	0.3	0.067	< 0.27	0.47	0.15	0.059	0.5	<6.8	<4.4
	E3-3	3	11/06/03	0.95	0.23	< 0.27	0.69	0.13	0.04	0.92	7.7	<4.3
	E3-4	3	11/06/03	0.29	< 0.031	< 0.25	0.25	0.086	0.045	0.31	<6.2	5.5
	E3-5	4	11/06/03	0.6	0.27	< 0.28	0.041	0.95	0.29	1.4	10	5.8
	E3-6	7	11/06/03	0.86	0.15	0.45	0.67	0.27	0.1	1.1	8	<4.4
	E3-7	12	11/11/03	0.1	< 0.034		< 0.034			< 0.034	13	13
	E3-8	12	12/12/03	1.2	0.67	< 0.53	3.7	1.1	0.33	3.4	1,900	<4.4
	E3-9	12	12/12/03	0.37	0.72	< 0.56	2.2	1.8	0.5	4.0	18	<4.6
	E3-10	12	12/12/03	1.9	0.94	< 0.55	4.9	1.8	0.51	4.7	26	<4.5
	E3-11	8	12/12/03	0.45	0.81	< 0.55	2.6	1.7	0.55	4.3	23	<4.5
	E3-12	9	12/12/03	0.1	0.41	< 0.52	0.66	1.4	0.44	2.0	15	<4.3
	E3-17	4	12/12/03	0.15	0.28	< 0.46	< 0.058	0.52	0.16	0.93	<12	<4.2
	E3-20	4	12/12/03	0.077	0.6	< 0.53	0.16	3.0	0.89	2.7	32	<4.5
	E3-21	4	12/12/03	<u>1.3</u>	4.0	< 0.44	3.5	8.4	2.5	13	100	<4.5
Area 4	X-7	3	01/08/03	0.041	< 0.058	< 0.47	< 0.058	< 0.058	< 0.058	< 0.12	<12	26
Area 5	E5-WE2	4	03/01/05	0.14	0.25	< 0.43	0.14	0.95	0.49	0.73	28	<3.3
	E5-F2	13	03/01/05	0.075	0.28	< 0.42	< 0.053	0.34	0.11	0.29	11	3.3
	E5-F5	13	03/01/05	0.11	0.11	< 0.38	< 0.047	0.32	0.15	0.19	12	4.3
Area 8	SP-1	3.5	01/09/03	0.065	0.1	< 0.5	0.15	0.19	0.069	0.39	<12	<4.2
	SP-3	3	01/09/03	0.051	< 0.067	< 0.54	1.8	0.085	< 0.067	0.11	<13	<4.5
WDNR Proposed Indus	strial Direct	Contact Level	(1)	7.41	37	293	818	219	182	258	ns	ns
NR 746 Direct Contact	Standards (	2)		1.1	4.6	ns	38	83	11	42	ns	ns
NR 720 RCL <sup>(3)</sup>				0.0055	2.9	ns	1.5	ns	ns	4.1	250	250

## NOTES:

All concentrations are in mg/kg (ppm) on a dry-weight basis.

Results in bold are above the NR 720 RCL.

Result underlined are above the current NR 746 Direct Contact Standard.

## ns = No standard

FOOTNOTES:

(1) WDNR, Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level

(2) NR 746.06 Tables 1 and 2, obtained from

(3) NR 720 Residual Contaminant Level (RCL), obtained from

## TABLE A.6

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	Below Ground Surface	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	<b>Steel Protective Pipe (S)</b>
W1	06/22/89	630.30		14.15		616.15	
	08/23/89	630.30		15.85		614.45	
	04/14/90	630.30		16.92		613.38	
	04/26/90	630.30		16.5		613.80	
	05/07/90	630.30		14.89		615.41	
	01/20/92	630.30		13.8		616.50	
	06/01/93	630.30		15.2		615.10	
	06/05/94	630.30		13.09		617.21	
	02/09/95	630.30		15.57		614.73	
	08/21/95	630.30		14.89		615.41	
	11/25/96	630.30		12.37		617.93	
	01/07/97	630.30		NG			
	07/12/99	630.30		11.3		619.00	
	11/08/99	630.30		12.74		617.56	
	03/28/00	630.30		14.91		615.39	
	06/27/00	630.30		13.46		616.84	
	09/26/00	630.30		13.03		617.27	
Site re-surveyed 7/26/2002	03/06/01	630.73	2.46	16.11	13.65	614.62	
	12/11/01	630.73	2.46	14.7	12.24	616.03	
	03/01/05	630.73	2.46	15.96	13.50	614.77	Р
	07/13/05	630.73	2.46	14.02	11.56	616.71	
	11/14/05	630.73	2.46	14.1	11.64	616.63	
	05/05/09	630.73	2.46	14.41	11.95	616.32	Р
Site re-surveyed 5/2010	04/28/10	630.74	1.94	15.44	13.50	615.30	Р
	08/03/10	630.74	1.94	14.01	12.07	616.73	Р
	10/25/10	630.74	1.94	14	12.06	616.74	Р
	05/03/11	630.74	1.94	14.09	12.15	616.65	Р
	08/01/11	630.74	1.94	13.63	11.69	617.11	Р
	10/24/11	630.74	1.94	15.37	13.43	615.37	Р
	05/15/12	630.74	1.94	14.55	12.61	616.19	Р
	07/10/12	630.74	1.94	13.83	11.89	616.91	Р
		630.74	1.94				

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
well ID	Date	(feet msl)	(feet ags)	(feet)	Below Ground Surface	(feet msl)	PVC casing (P) or Steel Protective Pine (S)
	06/22/89	620 79	(iter ago)	9.02	(iece)	611 77	Sterribteuveripe (5)
	08/23/89	620.79		10		610.79	
	04/14/90	620.79		10 47		610.32	
	04/26/90	620.79		10.3		610.49	
	05/07/90	620.79		9.34		611.45	
	01/20/92	620.79		8.67		612.12	
	06/01/93	620.79		8.2		612.59	
	06/05/94	620.79		8.28		612.51	
	02/09/95	620.79		9.7		611.09	
	08/21/95	620.79		9.38		611.41	
	11/25/96	620.79		7.11		613.68	
	01/07/97	620.79		8.22		612.57	
	07/12/99	620.79		7.61		613.18	
	11/08/99	620.79		7.85		612.94	
	03/28/00	620.79		9.27		611.52	
	06/27/00	620.79		8.43		612.36	
	09/26/00	620.79		9.30		611.49	
Site re-surveyed 7/26/2002	03/06/01	621.21	0.82	9.79	8.97	611.42	
	12/11/01	621.21	0.82	10.47	9.65	610.74	
	06/06/02	621.21	0.82	9.14	8.32	612.07	
			Aba	ndoned			
W-2R	05/05/09	629.63		15.17		614.46	Р
Site re-surveyed 5/2010	04/28/10	628.38	2.53	17.2	14.67	611.18	Р
	08/03/10	628.38	2.53	15.3	12.77	613.08	Р
	10/25/10	628.38	2.53	16.58	14.05	611.80	Р
	05/03/11	628.38	2.53	17.38	14.85	611.00	Р
	08/01/11	628.38	2.53	14.31	11.78	614.07	Р
	10/24/11	628.38	2.53	15.43	12.90	612.95	Р
	05/15/12	628.38	2.53	15.54	13.01	612.84	Р
	07/10/12	628.38	2.53	14.50	11.97	613.88	Р
		628.38	2.53				

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	Below Ground Surface	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W3	06/22/89	615.21		9.9		605.31	
	08/23/89	615.21		8.5		606.71	
	04/14/90	615.21		9.97		605.24	
	04/26/90	615.21		9.4		605.81	
	05/07/90	615.21		9.9		605.31	
	01/20/92	615.21		6.69		608.52	
	06/01/93	615.21		3.6		611.61	
	06/05/94	615.21		5.18		610.03	
	02/09/95	615.21		9.9		605.31	
	08/21/95	615.21		7.82		607.39	
	11/25/96	615.21		3.55		611.66	
	01/07/97	615.21		6.79		608.42	
	07/12/99	615.21		3.88		611.33	
	11/08/99	615.21		5.1		610.11	
	03/28/00	615.21		7.56		607.65	
	06/27/00	615.21		6.89		608.32	
	09/26/00	615.21		8.7		606.51	
Site re-surveyed 7/26/2002	03/06/01	615.94	1.35	10.22	8.87	605.72	
	12/11/01	615.94	1.35	8.62	7.27	607.32	
	06/06/02	615.94	1.35	7.55	6.20	608.39	
	11/14/05	615.94	1.35	7.75	6.40	608.19	S
	05/05/09	615.94	1.35	6.37	5.02	609.57	
Site re-surveyed 5/2010	04/28/10	616.00	0.04	8.02	7.98	607.98	Р
	08/03/10	616.00	0.04	6.4	6.36	609.60	Р
	10/25/10	616.00	0.04	6.71	6.67	609.29	Р
	05/03/11	616.00	0.04	6.26	6.22	609.74	Р
	08/02/11	616.00	0.04	5.42	5.38	610.58	Р
	10/24/11	616.00	0.04	8.58	8.54	607.42	Р
	05/15/12	616.00	0.04	7.96	7.92	608.04	Р
	07/10/12	616.00	0.04	4.41	4.37	611.59	Р
		616.00	0.04				

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	<b>Below Ground Surface</b>	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	<b>Steel Protective Pipe (S)</b>
MW-4	06/22/89	630.40		11.83		618.57	
	08/23/89	630.40		15.7		614.70	
	04/14/90	630.40		19.17		611.23	
	04/26/90	630.40		16.2		614.20	
	05/07/90	630.40		13.41		616.99	
	01/20/92	630.40		10.61		619.79	
	06/01/93	630.40		NG			
	06/05/94	630.40		10.38		620.02	
	02/09/95	630.40		NG			
	08/21/95	630.40		NG			
	11/25/96	630.40		8.77		621.63	
	01/07/97	630.40		10.53		619.87	
	07/12/99	630.40		9.03		621.37	
	11/08/99	630.40		8.17		622.23	
	03/28/00	630.40		14.02		616.38	
	06/27/00	630.40		10.99		619.41	
	09/26/00	630.40		14.64		615.76	
Site re-surveyed 7/26/2002	03/06/01	626.40	2.34	13.18	10.84	613.22	
	12/11/01	626.40	2.34	12.25	9.91	614.15	
	03/01/05	626.40	2.34	13.07	10.73	613.33	Р
	07/13/05	626.40	2.34	6.53	4.19	619.87	
	11/14/05	626.40	2.34	7.52	5.18	618.88	
	05/05/09	626.40	2.34	7.49	5.15	618.91	
Site re-surveyed 5/2010	04/28/10	626.55	2.48	10.67	8.19	615.88	Р
	08/03/10	626.55	2.48	5.47	2.99	621.08	Р
	10/25/10	626.55	2.48	2.88	0.40	623.67	Р
	05/03/11	626.55	2.48	3.52	1.04	623.03	Р
	8/1/2011	626.55	2.48	9.60	7.12	616.95	Р
	8/1/2011	626.55	2.48	11.94	9.46	614.61	Р
	5/15/2012	626.55	2.48	7.89	5.41	618.66	Р
	7/10/2012	626.55	2.48	9.39	6.91	617.16	Р
		626.55	2.48				

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	<b>Below Ground Surface</b>	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
MW-5	06/22/89	622.54		13.04		609.50	
	08/23/89	622.54		13.9		608.64	
	04/14/90	622.54		13.82		608.72	
	04/26/90	622.54		13.65		608.89	
	05/07/90	622.54		13.05		609.49	
	01/20/92	622.54		13.01		609.53	
	06/01/93	622.54		12.1		610.44	
	06/05/94	622.54		11.98		610.56	
	02/09/95	622.54		13.47		609.07	
	08/21/95	622.54		13.27		609.27	
	11/25/96	622.54		11.28		611.26	
	01/07/97	622.54		12.5		610.04	
	07/12/99	622.54		11.3		611.24	
	11/08/99	622.54		11.75		610.79	
	03/28/00	622.54		12.52		610.02	
	06/27/00	622.54		12.07		610.47	
	09/26/00	622.54		12.98		609.56	
Site re-surveyed 7/26/2002	03/06/01	617.22	2.97	7.64	4.67	609.58	
	12/11/01	617.22	2.97	6.90	3.93	610.32	
	03/01/05	617.22	2.97	8.79	5.82	608.43	S
	07/13/05	617.22	2.97	6.53	3.56	610.69	
	11/14/05	617.22	2.97	6.50	3.53	610.72	Р
	05/05/09	617.22	2.97	6.28	3.31	610.94	Р
Site re-surveyed 5/2010	04/28/10	618.49	4.16	7.09	2.93	611.40	Р
	08/03/10	618.49	4.16	6.41	2.25	612.08	Р
	10/25/10	618.49	4.16	6.41	2.25	612.08	Р
	05/03/11	618.49	4.16	6.67	2.51	611.82	Р
	8/1/2011	618.49	4.16	7.23	3.07	611.26	Р
	10/24/2011	618.49	4.16	8.01	3.85	610.48	Р
	5/15/2012	618.49	4.16	7.11	2.95	611.38	Р
	7/10/2012	618.49	4.16	7.31	3.15	611.18	Р
		618.49	4.16				

Well ID	Data	Top of Casing	Riser Pipe	Depth to Water (from TOC)	Water Depth Below Ground Surface	Groundwater	Measured from top of PVC casing (P) or
wen ID	Date	(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
MW-6	06/22/89	629.36		16.91		612.45	
	08/23/89	629.36		18.15		611.21	
	04/14/90	629.36		18.59		610.77	
	04/26/90	629.36		18.3		611.06	
	05/07/90	629.36		17.37		611.99	
	01/20/92	629.36		16.64		612.72	
	06/01/93	629.36		15.9		613.46	
	06/05/94	629.36		16.24		613.12	
	02/09/95	629.36		17.75		611.61	
	08/21/95	629.36		17.47		611.89	
	11/25/96	629.36		15.47		613.89	
	01/07/97	629.36		16.3		613.06	
	07/12/99	629.36		15.6		613.76	
	11/08/99	629.36		15.82		613.54	
	03/28/00	629.36		17.29		612.07	
	06/27/00	629.36		16.55		612.81	
	09/26/00	629.36		17.31		612.05	
*Site re-surveyed 7/26/2002	03/06/01	621.29	-3.00	12.46	15.46	608.83	
	12/11/01	621.29	-3.00	11.79	14.79	609.50	
	05/05/09	621.29	-3.00	11.63	14.63	609.66	Р
Site re-surveyed 5/2010	04/28/10	624.74	3.35	12.45	9.10	612.29	Р
	08/03/10	624.74	3.35	11.58	8.23	613.16	Р
	10/25/10	624.74	3.35	11.42	8.07	613.32	Р
	05/03/11	624.74	3.35	11.42	8.07	613.32	Р
	8/1/2011	624.74	3.35	11.34	7.99	613.40	Р
	10/24/2011	624.74	3.35	12.43	9.08	612.31	Р
	5/15/2012	624.74	3.35	12.15	8.8	612.59	Р
	7/10/2012	624.74	3.35	11.38	8.03	613.36	Р
		624.74	3.35				

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	<b>Below Ground Surface</b>	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W7	04/26/90	620.66		15.6		605.06	
	05/07/90	620.66		19.9		600.76	
	01/20/92	620.66		12.91		607.75	
	06/01/93	620.66		10.25		610.41	
	06/05/94	620.66		11.43		609.23	
	02/09/95	620.66		19.9		600.76	
	08/21/95	620.66		14.27		606.39	
	11/25/96	620.66		9.92		610.74	
	01/07/97	620.66		12.61		608.05	
	07/12/99	620.66		10.41		610.25	
	11/08/99	620.66		11.25		609.41	
	03/28/00	620.66		14.16		606.50	
	06/27/00	620.66		13.03		607.63	
	09/26/00	620.66		14.56		606.10	
Site re-surveyed 7/26/2002	03/06/01	621.09	2.10	15.73	13.63	605.36	
	12/11/01	621.09	2.10	14.75	12.65	606.34	
	06/06/02	621.09	2.10	12.50	10.40	608.59	
	03/01/05	621.09	2.10	14.49	12.39	606.60	Р
	07/13/05	621.09	2.10	11.59	9.49	609.50	
	11/14/05	621.09	2.10	12.32	10.22	608.77	
	05/05/09	621.09	2.10	12.55	10.45	608.54	Р
Site re-surveyed 5/2010	04/28/10	621.02	2.00	14.00	12.00	607.02	Р
	08/03/10	621.02	2.00	12.79	10.79	608.23	Р
	10/25/10	621.02	2.00	12.92	10.92	608.10	Р
	05/03/11	621.02	2.00	12.97	10.97	608.05	Р
	08/02/11	621.02	2.00	12.10	10.10	608.92	Р
	10/24/11	621.02	2.00	14.51	12.51	606.51	Р
	05/15/12	621.02	2.00	13.36	11.36	607.66	Р
	07/10/12	621.02	2.00	11.19	9.19	609.83	Р
		621.02	2.00				
W8	04/26/90	626.49		14.00		612.49	
	05/07/90	626.49		11.38		615.11	
	01/20/92	626.49		10.09		616.40	
	06/01/93	626.49		9.70		616.79	
	06/05/94	626.49		9.78		616.71	
	02/09/95	626.49		12.51		613.98	
	08/21/95	626.49		12.61		613.88	

Well ID	Date	Top of Casing Elevation	Riser Pipe Height	Depth to Water (from TOC)	Water Depth Below Ground Surface	Groundwater Elevation	Measured from top of PVC casing (P) or
,,, en 12	Dutt	(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W8R	01/07/97	628.54		12.39		616.15	
	07/12/99	628.54		12.11		616.43	
	11/08/99	628.54		12.54		616.00	
	03/28/00	628.54		10.71		617.83	
	06/27/00	628.54		13.08		615.46	
	09/26/00	628.54		14.50		614.04	
Site re-surveyed 7/26/2002	03/06/01	626.93	2.98	13.62	10.64	613.31	
	12/11/01	626.93	2.98	13.33	10.35	613.60	
	06/06/02	626.93	2.98	12.50	9.52	614.43	
	03/01/05	626.93	2.98	11.00	8.02	615.93	Р
	07/13/05	626.93	2.98	11.65	8.67	615.28	
	11/14/05	626.93	2.98	11.92	8.94	615.01	
	05/05/09	626.93	2.98	10.58	7.60	616.35	Р
Site re-surveyed 5/2010	04/28/10	625.72	2.16	11.47	9.31	614.25	Р
	08/03/10	625.72	2.16	10.64	8.48	615.08	Р
	10/25/10	625.72	2.16	10.6	8.44	615.12	Р
	05/03/11	625.72	2.16	10.57	8.41	615.15	Р
	08/01/11	625.72	2.16	10.39	8.23	615.33	Р
	10/24/11	625.72	2.16	11.75	9.59	613.97	Р
	05/15/12	625.72	2.16	11.11	8.95	614.61	Р
	07/10/12	625.72	2.16	10.56	8.40	615.16	Р
		625.72	2.16				

Well ID	Date	Top of Casing Elevation	Riser Pipe Height	Depth to Water (from TOC)	Water Depth Below Ground Surface	Groundwater Elevation	Measured from top of PVC casing (P) or
	Duit	(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W9	01/20/92	631.27		14.77		616.50	
	06/01/93	631.27		13.49		617.78	
	06/05/94	631.27		14.01		617.26	
	02/09/95	631.27		16.59		614.68	
	08/21/95	631.27		15.89		615.38	
	11/25/96	631.27		13.22		618.05	
	01/07/97	631.27		14.66		616.61	
	07/12/99	631.27		13.53		617.74	
	11/08/99	631.27		13.79		617.48	
	03/28/00	631.27		15.93		615.34	
	06/27/00	631.27		14.65		616.62	
	09/26/00	631.27		16.04		615.23	
Site re-surveyed 7/26/2002	03/06/01	632.01	2.22	17.28	15.06	614.73	
	12/11/01	632.01	2.22	15.72	13.50	616.29	
	03/01/05	632.01	2.22	17.08	14.86	614.93	Р
	07/13/05	632.01	2.22	15.15	12.93	616.86	
	11/14/05	632.01	2.22	15.16	12.94	616.85	
	05/05/09	632.01	2.22	15.56	13.34	616.45	Р
Site re-surveyed 5/2010	04/28/10	632.25	2.34	16.72	14.38	615.53	Р
	08/03/10	632.25	2.34	15.21	12.87	617.04	Р
	10/25/10	632.25	2.34	15.20	12.86	617.05	Р
	05/03/11	632.25	2.34	15.52	13.18	616.73	Р
	08/01/11	632.25	2.34	17.10	14.76	615.15	Р
	10/24/11	632.25	2.34	16.78	14.44	615.47	Р
	05/15/12	632.25	2.34	16.11	13.77	616.14	Р
	07/10/12	632.25	2.34	15.30	12.96	616.95	Р
		632.25	2.34				

Well ID	Date	Top of Casing Elevation	Riser Pipe Height	Depth to Water (from TOC)	Water Depth Below Ground Surface	Groundwater Elevation	Measured from top of PVC casing (P) or
	Dute	(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W10	01/20/92	629.63		14.80		614.83	
	06/01/93	629.63		13.85		615.78	
	06/05/94	629.63		14.25		615.38	
	02/09/95	629.63		16.30		613.33	
	08/21/95	629.63		15.83		613.80	
	11/25/96	629.63		13.47		616.16	
	01/07/97	629.63		14.51		615.12	
	07/12/99	629.63		13.67		615.96	
	11/08/99	629.63		13.90		615.73	
	03/28/00	629.63		15.84		613.79	
	06/27/00	629.63		14.69		614.94	
	09/26/00	629.63		15.81		613.82	
Site re-surveyed 7/26/2002	03/06/01	630.04	2.22	16.82	14.60	613.22	
	12/11/01	630.04	2.22	15.75	13.53	614.29	
	06/06/02	630.04	2.22	15.58	13.36	614.46	
	03/01/05	630.04	2.22	17.01	14.79	613.03	S
	07/13/05	630.04	2.22	14.91	12.69	615.13	Р
	11/14/05	630.04	2.22	15.10	12.88	614.94	Р
	05/05/09	630.04	2.22	15.25	13.03	614.79	Р
Site re-surveyed 5/2010	04/28/10	630.06	1.99	16.10	14.11	613.96	Р
	08/03/10	630.06	1.99	15.04	13.05	615.02	Р
	10/25/10	630.06	1.99	14.96	12.97	615.10	Р
	05/03/11	630.06	1.99	15.08	13.09	614.98	Р
	08/01/11	630.06	1.99	14.68	12.69	615.38	Р
	10/24/11	630.06	1.99	16.05	14.06	614.01	Р
	05/15/12	630.06	1.99	15.6	13.61	614.46	Р
	07/10/12	630.06	1.99	14.81	12.82	615.25	Р
		630.06	1.99				
#### **GROUNDWATER ELEVATION DATA**

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	<b>Below Ground Surface</b>	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W11	01/20/92	625.06		13.29		611.77	
	06/01/93	625.06		12.60		612.46	
	06/05/94	625.06		13.02		612.04	
	02/09/95	625.06		14.28		610.78	
	08/21/95	625.06		14.03		611.03	
	11/25/96	625.06		12.29		612.77	
	01/07/97	625.06		12.97		612.09	
	07/12/99	625.06		12.43		612.63	
	11/08/99	625.06		12.68		612.38	
	03/28/00	625.06		14.02		611.04	
	06/27/00	625.06		13.24		611.82	
	09/26/00	625.06		13.03		612.03	
Site re-surveyed 7/26/2002	03/06/01	625.53	2.63	14.43	11.80	611.10	
	12/11/01	625.53	2.63	13.87	11.24	611.66	
	06/06/02	625.53	2.63	13.79	11.16	611.74	
	03/01/05	625.53	2.63	14.08	11.45	611.45	Р
	07/13/05	625.53	2.63	13.23	10.60	612.30	
	11/14/05	625.53	2.63	16.11	13.48	609.42	
	05/05/09	625.53	2.63	13.45	10.82	612.08	Р
Site re-surveyed 5/2010	04/28/10	625.50	2.40	14.16	11.76	611.34	Р
	08/03/10	625.50	2.40	13.26	10.86	612.24	Р
	10/25/10	625.50	2.40	13.12	10.72	612.38	Р
	05/03/11	625.50	2.40	13.46	11.06	612.04	Р
	08/01/11	625.50	2.40	13.08	10.68	612.42	Р
	10/24/11	625.50	2.40	13.97	11.57	611.53	Р
	05/15/12	625.50	2.40	13.97	11.57	611.53	Р
	07/10/12	625.50	2.40	13.09	10.69	612.41	Р
		625.50	2.40				

## GROUNDWATER ELEVATION DATA

Well ID Date		Top of Casing	Riser Pipe	Depth to	Water Depth Below Cround Surface	Groundwater	Measured from top of BVC coging (B) or
wen ID	Date	(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W12	01/20/92	628.55		15.93		612.62	
	06/01/93	628.55		15.20		613.35	
	06/05/94	628.55		15.59		612.96	
	02/09/95	628.55		17.05		611.50	
	08/21/95	628.55		16.75		611.80	
	11/25/96	628.55		14.79		613.76	
	01/07/97	628.55		15.55		613.00	
	07/12/99	628.55		15.01		613.54	
	11/08/99	628.55		15.24		613.31	
	03/28/00	628.55		16.70		611.85	
	06/27/00	628.55		15.86		612.69	
	09/26/00	628.55		16.72		611.83	
Site re-surveyed 7/26/2002	03/06/01	629.01	1.59	17.30	15.71	611.71	
	12/11/01	629.01	1.59	16.60	15.01	612.41	
	03/01/05	629.01	1.59	16.90	15.31	612.11	Р
	07/13/05	629.01	1.59	15.87	14.28	613.14	
	11/14/05	629.01	1.59	13.42	11.83	615.59	
	05/05/09	629.01	1.59	16.25	14.66	612.76	Р
Site re-surveyed 5/2010	04/28/10	629.10	2.43	17.02	14.59	612.08	Р
	08/03/10	629.10	2.43	16.11	13.68	612.99	Р
	10/25/10	629.10	2.43	16.04	13.61	613.06	Р
	05/03/11	629.10	2.43	16.31	13.88	612.79	Р
	08/01/11	629.10	2.43	15.92	13.49	613.18	Р
	10/24/11	629.10	2.43	16.98	14.55	612.12	Р
	05/15/12	629.10	2.43	16.84	14.41	612.26	Р
	07/10/12	629.10	2.43	15.97	13.54	613.13	Р
		629.10	2.43				

#### **GROUNDWATER ELEVATION DATA**

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	Below Ground Surface	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W13	01/20/92	626.09		12.74		613.35	
	06/01/93	626.09		12.05		614.04	
	06/05/94	626.09		12.50		613.59	
	02/09/95	626.09		14.17		611.92	
	08/21/95	626.09		13.88		612.21	
	11/25/96	626.09		11.74		614.35	
	01/07/97	626.09		12.66		613.43	
	07/12/99	626.09		12.06		614.03	
	11/08/99	626.09		12.25		613.84	
	03/28/00	626.09		13.90		612.19	
	06/27/00	626.09		13.01		613.08	
	09/26/00	626.09		13.92		612.17	
Site re-surveyed 7/26/2002	03/06/01	626.97	2.96	14.62	11.66	612.35	
	12/11/01	626.97	2.96	13.82	10.86	613.15	
	06/06/02	626.97	2.96	13.75	10.79	613.22	
	03/01/05	626.97	2.96	14.43	11.47	612.54	Р
	07/13/05	626.97	2.96	13.30	10.34	613.67	
	11/14/05	626.97	2.96	13.50	10.54	613.47	
	05/05/09	626.97	2.96	13.85	10.89	613.12	Р
Site re-surveyed 5/2010	04/28/10	627.37	2.98	14.68	11.70	612.69	Р
	08/03/10	627.37	2.98	13.71	10.73	613.66	Р
	10/25/10	627.37	2.98	13.58	10.60	613.79	Р
	05/03/11	627.37	2.98	13.53	10.55	613.84	Р
	08/01/11	627.37	2.98	13.94	10.96	613.43	Р
	10/24/11	627.37	2.98	14.59	11.61	612.78	Р
	05/15/12	627.37	2.98	14.45	11.47	612.92	Р
	07/10/12	627.37	2.98	13.60	10.62	613.77	Р
		627.37	2.98				

#### **GROUNDWATER ELEVATION DATA**

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	Below Ground Surface	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W14	01/07/97	625.77		14.52		611.25	
	07/12/99	625.77		13.92		611.85	
	11/08/99	625.77		14.18		611.59	
	03/28/00	625.77		15.38		610.39	
	06/27/00	625.77		14.64		611.13	
	09/26/00	625.77		15.33		610.44	
Site re-surveyed 7/26/2002	03/06/01	626.21	2.95	15.70	12.75	610.51	
, , , , , , , , , , , , , , , , , , ,	12/11/01	626.21	2.95	15.20	12.25	611.01	
	03/01/05	626.21	2.95	15.39	12.44	610.82	Р
	07/13/05	626.21	2.95	14.60	11.65	611.61	
	11/14/05	626.21	2.95	14.80	11.85	611.41	
	05/05/09	626.21	2.95	14.8	11.85	611.41	Р
Site re-surveyed 5/2010	04/28/10	626.14	3.04	15.45	12.41	610.69	Р
	08/03/10	626.14	3.04	14.81	11.77	611.33	Р
	10/25/10	626.14	3.04	14.54	11.50	611.60	Р
	05/03/11	626.14	3.04	14.8	11.76	611.34	Р
	08/01/11	626.14	3.04	14.51	11.47	611.63	р
	10/24/11	626.14	3.04	15.27	12.23	610.87	Р
	05/15/12	626.14	3.04	15.22	12.18	610.92	Р
	07/10/12	626.14	3.04	14.41	11.37	611.73	Р
		626.14	3.04				-
W15	01/07/97	614.02		5.82		608.20	
	07/12/99	614.02		4.24		609.78	
	11/08/99	614.02		4.91		609.11	
	03/28/00	614.02		7.27		606.75	
	06/27/00	614.02		6.58		607.44	
	09/26/00	614.02		8.04		605.98	
Site re-surveyed 7/26/2002	03/06/01	614.97	2.28	8.87	6.59	606.10	
	12/11/01	614.97	2.28	7.85	5.57	607.12	
	03/01/05	614.97	2.28	7.86	5.58	607.11	Р
	07/13/05	614.97	2.28	5.08	2.80	609.89	
	11/14/05	614.97	2.28	5.48	3.20	609.49	
<u> </u>	05/05/09	614.97	2.28	5.9	3.62	609.07	Р
Site re-surveyed 5/2010	04/28/10	614.87	2.18	7.22	5.04	607.65	P
	1025/10	614.87	2.18	Could not find well		Could not find well	ŋ
	05/03/11	61/ 87	2.10	57	4.21	600.17	r D
	03/03/11	614.87	2.10	5.1	2.96	609.17	r P
	10/24/11	614.87	2.10	7 76	5 58	607.11	p
	05/15/12	614.87	2.18	6.62	4.44	608.25	p
	07/10/12	614.87	2.18	4.94	2.76	609.93	P
	01110112	614.87	2.18			007170	-

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### GROUNDWATER ELEVATION DATA

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	Below Ground Surface	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
W-16	05/05/09	624.04		8.07		615.97	Р
Site re-surveyed 5/2010	04/28/10	622.92	3.02	10.11	7.09	612.81	Р
ÿ	08/03/10	622.92	3.02	7.88	4.86	615.04	Р
	10/25/10	622.92	3.02	8.72	5.70	614.20	Р
	05/03/11	622.92	3.02	5.43	2.41	617.49	Р
	08/01/11	622.92	3.02	7.19	4.17	615.73	Р
	10/24/11	622.92	3.02	10.03	7.01	612.89	Р
	05/15/12	622.92	3.02	10.03	7.01	612.89	Р
	07/10/12	622.92	3.02	9.40	6.38	613.52	Р
		622.92	3.02				
W-17	05/05/09	622.84		4.59		618.25	Р
Site re-surveyed 5/2010	04/28/10	621.75	2.41	5.49	3.08	616.26	Р
	08/03/10	621.75	2.41	4.67	2.26	617.08	Р
	10/25/10	621.75	2.41	5.24	2.83	616.51	Р
	05/03/11	621.75	2.41	4.96	2.55	616.79	Р
	08/01/11	621.75	2.41	4.67	2.26	617.08	Р
	10/24/11	621.75	2.41	6.2	3.79	615.55	Р
	05/15/12	621.75	2.41	4.78	2.37	616.97	Р
	07/10/12	621.75	2.41	4.54	2.13	617.21	Р
		621.75	2.41				
W-18	05/05/09	625.50		7.57		617.93	Р
Site re-surveyed 5/2010	04/28/10	624.26	2.55	6.31	3.76	617.95	Р
	08/03/10	624.26	2.55	6.2	3.65	618.06	Р
	10/25/10	624.26	2.55	7.42	4.87	616.84	Р
	05/03/11	624.26	2.55	6.94	4.39	617.32	Р
	08/01/11	624.26	2.55	7.25	4.70	617.01	Р
	10/24/11	624.26	2.55	8.87	6.32	615.39	Р
	05/15/12	624.26	2.55	7.44	4.89	616.82	Р
	07/10/12	624.26	2.55	6.74	4.19	617.52	Р
		624.26	2.55				
AMW-1	06/10/02	619.10	1.92	7.18	5.26	611.92	
	03/01/05	619.10	1.92	8.24	6.32	610.86	Р
	07/13/05	619.10	1.92	6.39	4.47	612.71	
	11/14/05	619.10	1.92	6.79	4.87	612.31	
	05/05/09	619.10	1.92	5.23	3.31	613.87	Р
Site re-surveyed 5/2010	04/28/10	619.04	1.71	5.72	4.01	613.32	Р
	08/03/10	619.04	1.71	4.69	2.98	614.35	Р
	10/25/10	619.04	1.71	5.1	3.39	613.94	Р
	05/03/11	619.04	1.71	4.46	2.75	614.58	Р
	08/02/11	619.04	1.71	3.79	2.08	615.25	Р
	10/24/11	619.04	1.71	5.53	3.82	613.51	Р
	05/15/12	619.04	1.71	5.26	3.55	613.78	Р
	07/10/12	619.04	1.71	4.11	2.40	614.93	Р
		619.04	1.71				

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#### **GROUNDWATER ELEVATION DATA**

		Top of Casing	Riser Pipe	Depth to	Water Depth	Groundwater	Measured from top of
Well ID	Date	Elevation	Height	Water (from TOC)	<b>Below Ground Surface</b>	Elevation	PVC casing (P) or
		(feet msl)	(feet ags)	(feet)	(feet)	(feet msl)	Steel Protective Pipe (S)
AMW-2	06/10/02	613.04	2.05	4.48	2.43	608.56	
	03/01/05	613.04	2.05	4.39	2.34	608.65	Р
	07/13/05	613.04	2.05	3.95	1.90	609.09	
	11/14/05	613.04	2.05	3.96	1.91	609.08	
	05/05/09	613.04	2.05	3.74	1.69	609.30	Р
Site re-surveyed 5/2010	04/28/10	613.46	1.05	4.34	3.29	609.12	Р
	08/03/10	613.46	1.05	3.65	2.60	609.81	Р
	10/25/10	613.46	1.05	3.58	2.53	609.88	Р
	05/03/11	613.46	1.05	3.86	2.81	609.60	Р
	08/02/11	613.46	1.05	3.32	2.27	610.14	Р
	10/24/11	613.46	1.05	4.89	3.84	608.57	Р
	05/15/12	613.46	1.05	4.49	3.44	608.97	Р
	07/10/12	613.46	1.05	4.23	3.18	609.23	Р
		613.46	1.05				
AMW-3	06/10/02	616.48	2.04	7.25	5.21	609.23	
			Aba	indoned			
AMW-3R	05/05/09	619.01		7.35		611.66	Р
Site re-surveyed 5/2010	04/28/10	617.88	2.42	8.81	6.39	609.07	Р
	08/03/10	617.88	2.42	6.86	4.44	611.02	Р
	10/25/10	617.88	2.42	7.8	5.38	610.08	Р
	05/03/11	617.88	2.42	6.63	4.21	611.25	Р
	8/2/2011	617.88	2.42	4.75	2.33	613.13	Р
	10/24/2011	617.88	2.42	9.47	7.05	608.41	Р
	5/15/2012	617.88	2.42	8.13	5.71	609.75	Р
	7/10/2012	617.88	2.42	6.56	4.14	611.32	Р
		617.88	2.42				
AMW-4	06/10/02	627.57	2.52	14.18	11.66	613.39	
	03/01/05	627.57	2.52	14.57	12.05	613.00	Р
	07/13/05	627.57	2.52	13.31	10.79	614.26	
	11/14/05	627.57	2.52	13.57	11.05	614.00	
	05/05/09	627.57	2.52	11.95	9.43	615.62	Р
Site re-surveyed 5/2010	04/28/10	627.59	2.46	13.19	10.73	614.40	Р
	08/03/10	627.59	2.46	11.90	9.44	615.69	Р
	5/3/2011	627.59	2.46	10.99	8.53	616.60	Р
	8/1/2011	627.59	2.46	12.2	9.74	615.39	Р
	10/24/2011	627.59	2.46	13.77	11.31	613.82	Р
	5/15/2012	627.59	2.46	13.14	10.68	614.45	Р
	7/10/2012	627.59	2.46	12.74	10.28	614.85	Р
		627.59	2.46	1			
<u> </u>							
NOTES.							

NOTES:

ags	Above ground surface		No data
feet msl	Feet above mean sea level.	NG	Not gauged

L:\projects\Chevron\Sites\_WI\306390\_55289\_Superior\proj\_mgmt\corres\reports\jjk\_GIS Registry Information\03-16-000145 Closure Request\Attmt A\Table A7

## ATTACHMENT B

### MAPS AND FIGURES

- B1a Location Map
- B1b Site Plan
- B1c RR Site Map
- B2a1 Soil Contamination Pre-Remediation
- B2a2 Soil Contamination Post-Remediation see figure B2b
- B2b Residual Contamination
- B3a1 Geologic Cross-Section
- B3a2 Geologic Cross-Section
- B3a3 Geologic Cross-Section
- B3a4 Geologic Cross-Section
- B3b Groundwater Isoconcentration see figure B2b
- B3c Groundwater Contour Map See Figure B3b
- B3d Monitoring Well Location Map See Figure B3b
- B4a Vapor Intrusion Map Not included since no vapor samples collected at site.
- B4b Other Media of Concern Not included since no other media of concern at site.
- B5 Structural Impediment Photos Parcel No. 048040103600 looking south and looking north

# **Gannett Fleming**

FIGURE B1a





Chevron Facility #306390 Former Unocal Terminal Superior, Wisconsin Project No.: 60301315

Site Plan









Chevron Facility #306390 Former Unocal Terminal Superior, Wisconsin Project No.: 60301315

Han

Excavation Areas and Residual Contamination

AECOM Figure B2b



Chevron Facility #306390 Former Unocal Terminal Superior, Wisconsin Project No.: 60301315

Excavation Areas and **Residual Contamination** 











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5 052913 jjk\_L55289-M102\_2013\_0524\_FB3bcd

\* ALL MONITORING WELLS HAVE BEEN ABANDONED

**Gannett Fleming** 

FIGURE B3bcd

NOTE 1. GROUNDWATER ELEVATIONS MEASURED ON JULY 10, 2012.

GROUNDWATER CONTOUR MAP (JULY 2012) CHEVRON FACILITY #306390 FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN





## ATTACHMENT C

# DOCUMENTATION OF REMEDIAL ACTION

Not included All applicable information has already been submitted.

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## ATTACHMENT D

# MAINTENANCE PLANS

Not included

Not included since maintenance plan not applicable for site.

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## ATTACHMENT E

## MONITORING WELL INFORMATION

<u>Not included</u> All monitoring wells have been located and will be properly abandoned upon the WDNR granting conditional closure to the site

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## ATTACHMENT F

## SOURCE LEGAL DOCUMENTS

- F1 Source Property Deed and Legal Description
- F2 Certified Survey Map Not included since property does not have CSMs
- F3 Verification of Zoning
- F4 Signed Statement

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SOURCE Deed Record, Vol. 23, Douglas County, Wis. PROPERTY 1078A State of Illunous are. I Lewer C. Dorsett, County Clube and Clube of the County of Lake bouily Court in and for said county and kiefer of the records and share thereof, do merely civily that the suche leg whole name is subscribed to the intoy of factor orbited ye ment of the agriced instru ment in writing, where at the time of takely such proof acknowledgement, a justice of the Deace in and for said County red to take the same; and purther illight, & and well acquanded will be hand writing, and verily believe that the segurature to the said proof or adproved uniful is genuice; and pullie that the anneled instrument is executed and acknowledged according to the have of the state alline. ad affind the seal of said court at house, and in side. E take to said bounty, this Seventeulle day of Janaan all 1511. Lewie C. De Cett. y all. No a 50068. Quit Claim Deed. adolphus N. Boder ex ux Tiled for record February 5th U.D. 1891 at goclark a. m. The bastern Hailway. This indentitie, made this second day of May in the year of our Lord one thousand eight hundred and eighty nine between adolphus, N. Bode Trustee Katic Bode his wife partices of the first part and the bastern Railway Company of Minnesoth, a corporation a l l organized and existing under the laws of the clearlong and State of Minnes State and the State of Hisconsin, party of the second part, Wetnessett, that the said parties of the first part, in consideration of the sum of one dollar ("1) to them in hand paid by the party of the second part, the receipt whereof is hereby acknowledged, do by these presents, Grant, Dargain, Sell, Release and Quit Claim unto the said party of the second part its successore and assigns, forever all the following bracks or parcels of land, lying, and being nch (- 2 - 3 - 4 in the County of Douglas and State of Wiscomain described as follows to wit : C all that portion of Section Fifteens (15) in Jownships Forty-nine (49) of Range Fourley (14) Heat, bounded as follows: beginning on the North line of said section tif. lein (15) It a post two hundred and thirty nine (239.) feet West from the north toast corner of the chorth West quarter of said section and running due South Two thous and two hundred and thirty and leighty nine (30) one hundred the (2230 too) feet, thenge dide West find Kundred and twenty eight (528) feet, thence due Notth Two thousand two hundred and thirty seven and twenty nine (20) hundred the (2207 20)

305 SOURCE Deed Record, Vol. 23, Douglas County, Wis. PROPERTY feet to the north line of said section : Thence bast along the section line five hundred and twenty eight (528) 7 lui feet to the place of beginning, containing titenty seven acress and eight hundred the (2700) of an acri corde and hose Mame also all that portion of Section ten (10) Township used instru. forly nine (49) North, Range Fourteen (14) Hest, bounded as follows, beginning on the South line of said secwood or Laid County tion len (10) at a point, two hundred and thirty nine d author. (239) feet mast of the South bast corner of lot five (5) in said section tin (10) and running due North, ten hun. alguanded seguature doed sixty-nine and eleven one hundred this (1069 100) and Jullie fut, thende due Hest five hundred and twenty eight (528) feet, thence due Douth ten hundred sixty two wildred and deventing one, one hundred than (1062 100) feet to the Lucy hand South line of said section ten (10), Thence toast along an in the section line five hundred and twenty eight (528) ingal, 1511. acres, and ninely two hundredths of Can acre (12 " ). NR also beginning Sat a point two hundred and thirty nine (239) feet I due West of the North and South conry 5th (49) Northi, Range fourleen (14) Hest as measured from a point on said North ad South centre line m. May len hundred and sevenly two (1072) feet North from Inda The South line of said Section ten (10) and running ster Ed due North twenty two, fundred seventeen and ind the thirty eight hundred the (2217 30) feet to the dock line on At Lows Bay ! thence along the dock line ation lory South sixty one degours fifteen minutes West (261° 15'24) low course, five hundred ninety eight party and seven hundred the (59800) feet, thence due South ninetien hundred and thirty six and forty five hundred the (193600) feet, thence due to at five hundred and twenty eight (528) feet to the place of beginning, being a strip of land five hundred part, m in upt , Grant & partij and twenty eight (528) feet in width belween the teast and West lines thereof, and containing twenty furg 1 being and one hundred and seventy four thous and the scribed (25 1000 ) acres. Jogether with all and singular, the hireditaments nship and apportenances thereto belonging or in anymice as fal. appertaining where of the said parties of the first part hereunto set their hands and seals the day on tif-') fut and year first above written. Adolphus N. Oode Signed sealend delivered in E. Adolphus N. Oode marter nis and indriditie Elgin a. Shepard Katin ade venty , hundry angie & Shepard 1237 2)



# 2015 Property Record | Superior/Douglas County, WI

Assessed values not finalized until after Board of Review Property information is valid as of DEC 03 2015 11:41PM



**OWNER** ADDRESS BNSF JULIE A HEYEN, PORTFOLIO MANAGER, JLL ON BEHALF OF BNSF 4105 LEXINGTON AVE N STE 200 ARDEN HILLS, MN 55126 CO-OWNER(S) **PROPERTY DESCRIPTION** THAT PART OF THE NW1/4 OF SEC 15-49-14 DESCRIBED AS FORMER OWNERS FOLLOWS: BEG AT THE INTER- SECTION OF A LINE PARALLEL TO & DISTANT 1015 FT N'LY FROM THE E & W QUARTER LINE OF SAID (2014) UNION OIL CO OF CALIF SEC 15 WITH A LINE PARALLEL TO & DISTANT 15 FT W'LY FROM THE CENTER- LINE Property Address: **PROPERTY INFORMATION** 2301 WINTER ST 048040103500 Parcel ID: Municipality: CITY OF SUPERIOR Alternate ID: School Districts: SUPERIOR SCHOOL DIST **DEED INFORMATION** Other Districts: Volume Page Document # DOUGLAS COUNTY WITC (VTAE) Section Town Range **Qtr Qtr Section** Qtr Section LAND VALUATION 15 49N 14W 15 49N 14W 20051215 Valuation Date: Lot: <u>Code</u> <u>Acres</u> Land Value **Improvements** Total Block: G2 1.300 18,600 18,600 0 Plat Name: 1.300 18,600 18,600 0 NOT AVAILABLE Total Acres: 0.000 Plat History: Assessment Ratio: 1.0031 (2015) NOT AVAILABLE Mill Rate: 0.021449832 Fair Market Value: 18,500.00

# **TAX INFORMATION FOR 2015**

Net Tax Before Credits:			398.97
Lottery Credit:			.00
First Dollar Credit:			.00
Net Tax After:			398.97
	Amt. Due	Amt. Paid	<u>Balance</u>
Тах	398.97	.00	398.97
Special Assmnt	.00	.00	.00
Special Chrg	.00	.00	.00
Delinquent Chrg	.00	.00	.00
Private Forest	.00	.00	.00
Woodland Tax	.00	.00	.00
Managed Forest	.00	.00	.00
Prop. Tax Interest		.00	.00
Spec. Tax Interest		.00	.00
Prop. Tax Penalty		.00	.00
Spec. Tax Penalty		.00	.00
Other Charges	.00	.00	.00

# INSTALLMENTS

Period	End Date	<u>Amount</u>
1	01/31/16	199.49
2	07/31/16	199.48

TO <sup>-</sup> Over-Paym	TAL nent	398.97	.00 .00	D D	398.97			SOURCE	Y	
PAYMENT I	HISTORY (F	POSTED P	AYMENT	S)				(		
Date	Receipt #	Source	<u>Type</u>	<u>Amount</u>	1	ax Status	Assess. Status	Interest	Penalty	<u>Total</u>



# CHEVRON ENVIRONMENTAL MANAGEMENT CO. FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN BRRTS No.: 03-16-000145

To the best of my knowledge, I hereby state that the legal descriptions for parcels comprising the former Unocal Terminal release site in Superior as stated in the deeds dated February 5, 1891, and September 30, 1993, and included with this GIS Registry submittal are complete and accurate for all the properties associated with this release site that has soil and groundwater contamination that exceeded NR 720 Residual Contaminant Levels and NR 140 Enforcement Standards at the time that closure was requested.

JOHN K.

Printed Name

PROJECT MANAGER

Title

hno

Signature

December 21, 2015

Date

# ATTACHMENT G

## NOTIFICATIONS TO OWNERS OF IMPACTED PROPERTIES

Form4400-202-Attached

- Notification Letters and Accompanying Proofs of Delivery Attached
- G1: Off-Source Property Deeds and Legal Descriptions
- G2: Certified Map Survey <u>Not included since no certified map surveys are referenced in deeds</u>
- G3: Verification of Zoning
- G4: Signed Statement

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov



# Notification of Continuing Obligations and Residual Contamination

Form 4400-286 (5/15)

Page 1 of 7

Notice: Pursuant to s. 292.12(4), Wis. Stats., written notification of parties affected by residual contamination is required. Pursuant to ch. NR 725, Wis. Adm. Code, this form is required to be completed for those sites meeting the criteria in s. NR 725.05 (see below), by a responsible party seeking case closure approval pursuant to ch. NR 726, Wis. Adm. Code or by those persons seeking a remedial action plan approval pursuant to ch. NR 722, Wis. Adm. Code, or by local government units or economic development corporations that are required to take an action pursuant to ch. NR 708, Wis. Adm. Code, when the Department of Natural Resources (DNR) determines that notification is necessary. Personally identifiable information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law (ss. 19.31-19.39, Wis. Stats.). (Unless otherwise noted, citations refer to Wis. Adm. Code.)

Note: A copy of each completed form must also be submitted to the WI Department of Natural Resources, in accordance with s. NR 726.09 (3), Wis. Adm. Code.

## **Directions:**

- 1. Include the first page of this form, **Contact Information**, as an attachment with all notifications sent using Sections A and B. (*Filling out the Contact Information page allows for automatic entry of the contact information within the letter*.)
- 2. To notify affected parties about residual contamination and continuing obligations, use the appropriate section (A, B or C), based on the type of property to which the required notification is to be sent, per s. NR 725.05 and 725.07, Wis. Adm. Code:

Section A: Deeded Properties Section B: Right-of-Way (ROW) - non-Department of Transportation Section C: Department of Transportation (DOT) ROW

- 3. Select and use the applicable paragraphs, based on the types of residual contamination and continuing obligations for the specific property. For the "Residual Contamination" and "Continuing Obligations on Your Property" sections, the applicable language will appear upon selection of the checkboxes.
- 4. Include the information requested within each paragraph. If requesting remedial action plan approval, or if the Department has directed a local governmental unit to take an action at a site, modify the language regarding a "closure request" to reflect the appropriate situation ("remedial action plan approval" or a "liability clarification letter").
- 5. Once completed, print the form for mailing.
- 6. Under s. NR 725.07, Wis. Adm. Code, notification letters under section A and B are required to be sent via certified mail, return receipt requested, or priority mail with signature confirmation. If the notifications are sent via priority mail with signature confirmation, you may use the signature waiver option if you have reason to believe that the owner of the property or other recipient may refuse to sign for the notification.

## Situations for Which Notifications are Required:

Under s. NR 725.07, Wis. Adm. Code, notification is required for the following situations:

- groundwater contamination that attains or exceeds applicable standards remains upon completion of the remedial action
- soil contamination that attains or exceeds applicable standards remains upon completion of the remedial action,
- one or more monitoring wells have not been located for abandonment (fill and seal), or
- one or more monitoring wells will be kept for future monitoring, Do not use this option if the well/s are to be transferred to another site for continued monitoring. That will be addressed in the final closure letter, upon documentation that responsibility for the well/s has been accepted by the responsible party for the other site.
- a cover (which may include soil covers, pavement, engineered cover, foundations) was used to address exposure by either direct contact or the groundwater pathway,
- a structural impediment (generally a building or other type of structure) prevented completion of a site investigation or remedial action. This may also apply to site-specific situations which prevent a complete investigation or cleanup, such as an overhead power lines. Contact the agency with administrative authority first for site-specific situations.
- soil contamination has only been cleaned up to industrial residual contaminant levels, and the property's land use has been classified as industrial under ch. NR 720,
- (vapor) the continued operation of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owners when sub-slab vapor risk screening levels are exceeded, and the operation and maintenance of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion.



- (vapor) compounds of concern will continue to be used in facility operations after closure. Notification is provided to the current owner of the source property when that person is not the responsible party conducting the cleanup. Because the compound of concern is still in use, complete investigation of the vapor pathway may be impracticable, and cleanup may be limited in effectiveness as well.
- (vapor) a dewatering system needs to be operated and maintained in order for the vapor mitigation system (VMS) to work effectively.
  Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where a vapor mitigation system is necessary and a dewatering system is necessary to enable the vapor mitigation system to operate effectively, due to the hydrogeology. (Used in conjunction with the VMS option)
- (vapor) vapor inhalation exposure assumptions for a non-residential setting will be applied for closure. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where residential vapor action levels are exceeded, including at properties used for commercial or industrial purposes.
- (vapor) contamination in soil or groundwater from volatile compounds remains after completion of the remedial action, that could lead to vapor intrusion upon new construction, reconstruction or occupation of an existing building.

This is especially important in cases where elevated residual soil concentrations or large volumes of soil contaminated with volatile compounds remain. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where vapors may pose a health issue if buildings are to be constructed in the future, or if other land use changes or actions could result in a completed vapor pathway. This includes expansion or reconstruction of existing buildings.

The Department may also require a condition based on site-specific circumstances. In this case, consult with the project manager to determine what specific information to include in the notification of any affected property owner or right-of-way holder. *This has been used in limited situations where actions such as methane monitoring or fencing were required.* 

### **Parties Receiving Notifications:**

Under s. NR 725.05, Wis. Adm. Code, notification must be provided to:

- the owner of each property within or partially within the contaminated site or facility boundaries, other than properties owned by the responsible party,
- occupants of affected properties, as appropriate, (consult with the project manager if you have questions)
- the clerk of the county, town, village or city in which an affected public street or highway ROW is located, and municipal department or state agency that is responsible for the maintaining the public street or highway,
- the railroad that maintains the railroad right of way, and
- the owner of each property where a monitoring well will remain, for future abandonment or continued monitoring.

A summary of the notifications sent is to be provided in the case closure request form (4400-202). The attachment for "Notifications to Owners of Affected Properties", in Form 4400-202 includes a summary table of all notifications sent to all property owners or occupants of affected properties and to holders of affected ROWs, a copy of each letter sent, and a proof of receipt for each letter.

**Note:** A response to a closure request cannot be provided until at least 30 days after this notification letter has been sent. Documentation that this letter has been sent must be provided to the agency with administrative authority for an approval or decision under ch. NR 726, Wis. Adm. Code.



## List of Potential Attachments:

(list all attachments to be included; include name of attachment and figure numbers)

### Maps

Section A

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Location of Cover in relation to the extent of contamination (Maintenance of a Cover)

Section B

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Section C:

Groundwater Isoconcentration Map Soil Isoconcentration Map

### Maintenance plan

Section A

Maintenance of Plan - (Maintenance of a cover, Barrier, and/or Vapor Mitigation System)

### Factsheets:

Section A

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property

### Section B

Groundwater RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property



### The affected property is:

- O the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- a deeded property affected by contamination from the source property
- a right-of-way (ROW)
- a Department of Transportation (DOT) ROW

Include this completed page as an attachment with all notifications provided under sections A and B.

## **Contact Information**

Responsible Party: The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Chevron Environmental Management Company (Chevron)

Contact Person Last Name	First		MI	Phone Num	oer (inc	lude area code)
Frary	John		R	(71	3) 432	2-2645
Address		City			State	ZIP Code
4800 Fournace Place		Bellaire			ТΧ	77401
E-mail JFRARY@chevron.com						

## Name of Party Receiving Notification:

Business Name, if applicable:	Canadian Pacific
-------------------------------	------------------

Title	Last Name	First		MI	Phone Num	per (inc	lude area code)
Ms.	Thomas	LeeAnn M		Η			
Addres	S		City			State	ZIP Code
120 Se	outh 6th Street, Suite 900		Minneapolis			MN	55402

### Site Name and Source Property Information:

Site (Activity) Name Unocal Superior Terminal							
Address	City	State ZIP Code					
2301 Winter Street, Room E540B	Superior	WI 54880					
DNR ID # (BRRTS#) 03-16-000145	(DATCP) ID #						

### **Contacts for Questions:**

# If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

## Environmental Consultant: AECOM

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Tarara	Drew			(61	2) 376	5-2452
Address	-	City			State	ZIP Code
800 LaSalle Avenue S, Suite 500		Minneapolis			MN	55402
E-mail andrew.tarara@aecom.com						

### **Department Contact:**

### To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City			State	ZIP Code
107 Sutliff Ave		Rhinelander			WI	54501
Contact Person Last Name	First		MI	Phone Number (include area cod		
Ralph	Smith			(608) 261-6543		
E-mail (Firstname.Lastname@wisconsin.gov) Ralph.Smith@wisconsin.gov						



## Section A: Deeded Property Notification: Residual Contamination and/or Continuing Obligations

# **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

120 South 6th Street, Suite 900 Minneapolis, MN, 55402

Dear Ms. Thomas:

I am providing this letter to inform you of the location and extent of contamination remaining on your property, and of certain long-term responsibilities (continuing obligations) for which you may become responsible. I have investigated a release of:

No. 2 fuel oil and gasoline that occurred from the former Unocal Terminal

on 2301 Winter Street, Room E540B, Superior, WI, 54880 that has shown that contamination has migrated onto your property.

I have responded to the release and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

# You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

Please review the enclosed legal description of your property, and notify Drew Tarara at 800 LaSalle Avenue S, Suite 500, Minneapolis, MN, 55402 within the next 30 days if the legal description is incorrect.

The DNR will not review my closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information that is relevant to this closure request, or if you want to waive the 30 day comment period, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Ralph.Smith@wisconsin.gov.

## Your Long-Term Responsibilities as a Property Owner and Occupant:

The responses included

remediation of impacted soil to concentrations below industrial direct-contact standards in at least the top 4 feet at the site by Chevron Environmental Management Company (Chevron), the current lessee of the source property. The continuing obligations I am proposing that affect your property are listed below, under the heading **Continuing Obligations**. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "Continuing Obligations for Environmental Protection" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf</a>.

## Contract for responsibility for continuing obligation:

Before I request closure, I will need to inform the DNR as to whom will be responsible for the continuing obligation/s on your property.

As partial owners of one of source property's parcels (No. 04-804-00977-00), BNSF (4/6th ownership), Union Pacific Railroad (1/6th ownership), and Canadian Pacific (1/6th ownership) will jointly be responsible for the continuing obligations on the property.



# Notification of Continuing Obligations and Residual Contamination

Form 4400-286 (5/15)

Page 2 of 3

Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for the continuing obligations on your Property, you may request additional time from the DNR contact identified in **Contact Information**.

(Note: Future property owners would need to negotiate a new agreement.)

## **Remaining Contamination:**

Groundwater Contamination:

Groundwater contamination originated at the property located at 2301 Winter Street, Room E540B, Superior, WI, 54880.

Contaminated groundwater has migrated onto your property at:

Parcel No. 04-804-01077-00

The levels of

benzene

contamination in the groundwater on your property are above the state groundwater enforcement standards found in ch. NR 140, Wis. Adm. Code.

However, the environmental consultants who have investigated this contamination have informed me that this groundwater contaminant plume is stable or receding and will naturally degrade over time. I believe that allowing natural attenuation, or the breakdown of contaminants in groundwater due to naturally occurring processes, to complete the cleanup at this site will meet the case closure requirements of ch. NR 726, Wis. Adm. Code. As part of my request for case closure, I am requesting that the DNR accept natural attenuation as the final remedy for this site.

The following DNR fact sheet (RR 671, "What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater") has been included with this notification, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <u>http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf</u>.

**Continuing Obligations on Your Property:** As part of the cleanup, I am proposing that the following continuing obligations be used at your property, to address future exposure to residual contamination. If my closure request is approved, you will be responsible for the following continuing obligations.

To construct a new well or to reconstruct an existing well, the property owner at the time of construction or reconstruction will need to obtain prior approval from the DNR. See the paragraph **GIS Registry and Well Construction Requirements**. Typically, this results in casing off a portion of the aquifer during drilling, when needed, to protect the water supply.


#### Maintenance and Audits of Continuing Obligations:

If compliance with a maintenance plan is required as part of a continuing obligation, an inspection log will need to be filled out periodically, and kept available for inspection by the DNR. Submittal of the inspection log may also be required. You will also need to notify any future owners or occupants of this property of the need to maintain the continuing obligation and to document that maintenance in the inspection log. Periodic audits of these continuing obligations may be conducted by the DNR, to ensure that potential exposure to residual contamination is being addressed. The DNR provides notification before conducting site visits as part of the audit.

### **GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at <u>http://dnr.wi.gov/topic/Brownfields/clean.html</u>. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300–254, is on the internet at <a href="http://dnr.wi.gov/topic/wells/documents/3300254.pdf">http://dnr.wi.gov/topic/wells/documents/3300254.pdf</a>.

#### Site Closure:

If the DNR grants closure, you will receive a letter which defines the specific continuing obligations on your property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the **responsible party** or by writing to the DNR contact, at Smith Ralph. Smith@wisconsin.gov, (608) 261-6543. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

If you have any questions regarding this notification, I can be reached at: (713) 432-2645

JFRARY@chevron.com

hnn

Date Signed 12/4/2015

Signature of responsible party/environmental consultant for the responsible party

Attachments Contact Information Legal Description for each Parcel Parcel Map Groundwater Isoconcentration Map

#### **Factsheets:**

RR 819, Continuing Obligations for Environmental Protection RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater



State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 <u>dnr.wi.gov</u>

# Notification of Continuing Obligations and Residual Contamination

Form 4400-286 (5/15)

Page 1 of 8

Notice: Pursuant to s. 292.12(4), Wis. Stats., written notification of parties affected by residual contamination is required. Pursuant to ch. NR 725, Wis. Adm. Code, this form is required to be completed for those sites meeting the criteria in s. NR 725.05 (see below), by a responsible party seeking case closure approval pursuant to ch. NR 726, Wis. Adm. Code or by those persons seeking a remedial action plan approval pursuant to ch. NR 722, Wis. Adm. Code, or by local government units or economic development corporations that are required to take an action pursuant to ch. NR 708, Wis. Adm. Code, when the Department of Natural Resources (DNR) determines that notification is necessary. Personally identifiable information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law (ss. 19.31-19.39, Wis. Stats.). (Unless otherwise noted, citations refer to Wis. Adm. Code.)

Note: A copy of each completed form must also be submitted to the WI Department of Natural Resources, in accordance with s. NR 726.09 (3), Wis. Adm. Code.

#### **Directions:**

- 1. Include the first page of this form, **Contact Information**, as an attachment with all notifications sent using Sections A and B. (*Filling out the Contact Information page allows for automatic entry of the contact information within the letter.*)
- To notify affected parties about residual contamination and continuing obligations, use the appropriate section (A, B or C), based on the type of property to which the required notification is to be sent, per s. NR 725.05 and 725.07, Wis. Adm. Code:

Section A: Deeded Properties Section B: Right-of-Way (ROW) - non-Department of Transportation Section C: Department of Transportation (DOT) ROW

- 3. Select and use the applicable paragraphs, based on the types of residual contamination and continuing obligations for the specific property. For the "Residual Contamination" and "Continuing Obligations on Your Property" sections, the applicable language will appear upon selection of the checkboxes.
- 4. Include the information requested within each paragraph. If requesting remedial action plan approval, or if the Department has directed a local governmental unit to take an action at a site, modify the language regarding a "closure request" to reflect the appropriate situation ("remedial action plan approval" or a "liability clarification letter").
- 5. Once completed, print the form for mailing.
- 6. Under s. NR 725.07, Wis. Adm. Code, notification letters under section A and B are required to be sent via certified mail, return receipt requested, or priority mail with signature confirmation. If the notifications are sent via priority mail with signature confirmation, you may use the signature waiver option if you have reason to believe that the owner of the property or other recipient may refuse to sign for the notification.

# Situations for Which Notifications are Required:

Under s. NR 725.07, Wis. Adm. Code, notification is required for the following situations:

- groundwater contamination that attains or exceeds applicable standards remains upon completion of the remedial action
- soil contamination that attains or exceeds applicable standards remains upon completion of the remedial action,
- one or more monitoring wells have not been located for abandonment (fill and seal), or
- one or more monitoring wells will be kept for future monitoring, Do not use this option if the well/s are to be transferred to another site for continued monitoring. That will be addressed in the final closure letter, upon documentation that responsibility for the well/s has been accepted by the responsible party for the other site.
- a cover (which may include soil covers, pavement, engineered cover, foundations) was used to address exposure by either direct contact or the groundwater pathway,
- a structural impediment (generally a building or other type of structure) prevented completion of a site investigation or remedial action. This may also apply to site-specific situations which prevent a complete investigation or cleanup, such as an overhead power lines. Contact the agency with administrative authority first for site-specific situations.
- soil contamination has only been cleaned up to industrial residual contaminant levels, and the property's land use has been classified as industrial under ch. NR 720,
- (vapor) the continued operation of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owners when sub-slab vapor risk screening levels are exceeded, and the operation and maintenance of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion.



- Page 2 of 8
- (vapor) compounds of concern will continue to be used in facility operations after closure. Notification is provided to the current owner of the source property when that person is not the responsible party conducting the cleanup. Because the compound of concern is still in use, complete investigation of the vapor pathway may be impracticable, and cleanup may be limited in effectiveness as well.
- (vapor) a dewatering system needs to be operated and maintained in order for the vapor mitigation system (VMS) to work effectively. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where a vapor mitigation system is necessary and a dewatering system is necessary to enable the vapor mitigation system to operate effectively, due to the hydrogeology. (Used in conjunction with the VMS option)
- (vapor) vapor inhalation exposure assumptions for a non-residential setting will be applied for closure. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where residential vapor action levels are exceeded, including at properties used for commercial or industrial purposes.
- (vapor) contamination in soil or groundwater from volatile compounds remains after completion of the remedial action, that could lead to vapor intrusion upon new construction, reconstruction or occupation of an existing building.

This is especially important in cases where elevated residual soil concentrations or large volumes of soil contaminated with volatile compounds remain. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where vapors may pose a health issue if buildings are to be constructed in the future, or if other land use changes or actions could result in a completed vapor pathway. This includes expansion or reconstruction of existing buildings.

The Department may also require a condition based on site-specific circumstances. In this case, consult with the project manager to determine what specific information to include in the notification of any affected property owner or right-ofway holder. This has been used in limited situations where actions such as methane monitoring or fencing were required.

#### **Parties Receiving Notifications:**

Under s. NR 725.05, Wis. Adm. Code, notification must be provided to:

- the owner of each property within or partially within the contaminated site or facility boundaries, other than properties owned by the responsible party,
- occupants of affected properties, as appropriate, (consult with the project manager if you have questions)
- the clerk of the county, town, village or city in which an affected public street or highway ROW is located. and municipal department or state agency that is responsible for the maintaining the public street or highway,
- the railroad that maintains the railroad right of way, and
- the owner of each property where a monitoring well will remain, for future abandonment or continued monitoring.

A summary of the notifications sent is to be provided in the case closure request form (4400-202). The attachment for "Notifications to Owners of Affected Properties", in Form 4400-202 includes a summary table of all notifications sent to all property owners or occupants of affected properties and to holders of affected ROWs, a copy of each letter sent, and a proof of receipt for each letter.

**Note:** A response to a closure request cannot be provided until at least 30 days after this notification letter has been sent. Documentation that this letter has been sent must be provided to the agency with administrative authority for an approval or decision under ch. NR 726, Wis. Adm. Code.



#### List of Potential Attachments:

(list all attachments to be included; include name of attachment and figure numbers)

#### Maps

Section A

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Location of Cover in relation to the extent of contamination (Maintenance of a Cover)

Section B

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Section C:

Groundwater Isoconcentration Map Soil Isoconcentration Map

#### Maintenance plan

Section A

Maintenance of Plan - (Maintenance of a cover, Barrier, and/or Vapor Mitigation System)

#### Factsheets:

Section A

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property

#### Section B

Groundwater RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property



#### The affected property is:

- the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- O a deeded property affected by contamination from the source property
- O a right-of-way (ROW)
- O a Department of Transportation (DOT) ROW

#### **Contact Information**

Responsible Party: The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Chevron Environmental Management Company (Chevron)

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Frary	John		R	(71	3) 432	2-2645
Address	·	City			State	ZIP Code
4800 Fournace Place		Bellaire			ΤХ	77401
E-mail JFRARY@chevron.com						

#### Name of Party Receiving Notification:

Business Name, if applicable: Jones Lang LaSalle Americas, Inc.

Title	Last Name	First		MI	Phone Num	ber (inc	lude area code)
Ms.	Heyen	Julie					
Addres	SS	·	City			State	ZIP Code
4105 1	Lexington Avenue North, Suite 200		Arden Hills			MN	55126

#### Site Name and Source Property Information:

Site (Activity) Name Unocal Superior Terminal				
Address	(	City	State	ZIP Code
2301 Winter Street, Room E540B		Superior	WI	54880
DNR ID # (BRRTS#) 03-16-000145	(DATCF	P) ID #		

#### **Contacts for Questions:**

# If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

#### **Environmental Consultant: AECOM**

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Tarara	Andrew			(61	2) 376	-2452
Address		City			State	ZIP Code
800 LaSalle Avenue South, Suite 500		Minneapolis			MN	55402
E-mail andrew.tarara@aecom.com						

#### **Department Contact:**

#### To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City			State	ZIP Code		
107 Sutliff Ave		Rhinelander			WI	54501		
Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)		
Ralph	Smith			(608) 261-6543		-6543		
E-mail (Firstname.Lastname@wisconsin.gov) Ralph Smith@wisconsin gov								



#### Section A: Deeded Property Notification: Residual Contamination and/or Continuing Obligations

# **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

4105 Lexington Avenue North, Suite 200 Arden Hills, MN, 55126

Dear Ms. Heyen:

I am providing this letter to inform you of the location and extent of contamination remaining on your property, and of certain long-term responsibilities (continuing obligations) for which you may become responsible. I have investigated a release of:

No. 2 fuel oil and gasoline that occurred from the former Unocal Terminal

on 2301 Winter Street, Room E540B, Superior, WI, 54880 that has shown that contamination remains on this source property.

I have responded to the release and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

# You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

Please review the enclosed legal description of your property, and notify Andrew Tarara at 800 LaSalle Avenue South, Suite 500, Minneapolis, MN, 55402 within the next 30 days if the legal description is incorrect.

The DNR will not review my closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information that is relevant to this closure request, or if you want to waive the 30 day comment period, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Ralph.Smith@wisconsin.gov.

# Your Long-Term Responsibilities as a Property Owner and Occupant:

The responses included

remediation of impacted soil to concentrations below industrial direct-contact standards in at least the top 4 feet at the site by Chevron Environmental Management Company (Chevron), the current lessee of the source property. The continuing obligations I am proposing that affect your property are listed below, under the heading **Continuing Obligations**. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "Continuing Obligations for Environmental Protection" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf</a>.

# Contract for responsibility for continuing obligation:

Before I request closure, I will need to inform the DNR as to whom will be responsible for the continuing obligation/s on your property.

BNSF, as the property lessor, will be responsible for the continuing obligations on the property.



# Notification of Continuing Obligations and Residual Contamination

Form 4400-286 (5/15)

Page 2 of 4

Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for the continuing obligations on your Property, you may request additional time from the DNR contact identified in **Contact Information**.

(Note: Future property owners would need to negotiate a new agreement.)

### **Remaining Contamination:**

#### Soil Contamination:

Soil contamination remains at :

BNSF Parcel No. 04-804-01035-00. Attached Figure 1 and 2 show the approximate locations of these parcels and the soil contamination areas, respectively.

The remaining contaminants include:

benzo(a)anthracene, benzo(a)pyrene,

benzo(b)flouranthene, and naphthalene

at levels which exceed the soil standards found in ch. NR 720, Wis. Adm. Code. The following steps have been taken to address any exposure to the remaining soil contamination.

Known contaminated soil was excavated (Areas 1 and 3-8) and placed in biocells constructed on a portion of the former terminal area or remediated in place (Area 1). The soil was amended with a bulking agent (wood chips) and nutrients to promote the biological breakdown of the residual petroleum compounds and was turned periodically to provide oxygen to assist in the degradation of the petroleum compounds in the mixture. Soil confirmation samples were analyzed to document that the treated soil contained concentrations below direct contact, clean-up concentrations.

#### Groundwater Contamination:

Groundwater contamination originated at the property located at 2301 Winter Street, Room E540B, Superior, WI, 54880. The levels of

benzene, ethylbenzene, naphthalene, and trimethylbenzenes (at parcels 04-804-01033-00, 04-804-01035-00, and 04-804-01077-00)

contamination in the groundwater on your property are above the state groundwater enforcement standards found in ch. NR 140, Wis. Adm. Code (see Figure 3).

However, the environmental consultants who have investigated this contamination have informed me that this groundwater contaminant plume is stable or receding and will naturally degrade over time. I believe that allowing natural attenuation, or the breakdown of contaminants in groundwater due to naturally occurring processes, to complete the cleanup at this site will meet the case closure requirements of ch. NR 726, Wis. Adm. Code. As part of my request for case closure, I am requesting that the DNR accept natural attenuation as the final remedy for this site.

The following DNR fact sheet (RR 671, "What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater") has been included with this notification, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <u>http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf</u>.

**Continuing Obligations on Your Property:** As part of the cleanup, I am proposing that the following continuing obligations be used at your property, to address future exposure to residual contamination. If my closure request is approved, you will be responsible for the following continuing obligations.

To construct a new well or to reconstruct an existing well, the property owner at the time of construction or reconstruction will need to obtain prior approval from the DNR. See the paragraph **GIS Registry and Well Construction Requirements**. Typically, this results in casing off a portion of the aquifer during drilling, when needed, to protect the water supply.



#### **Residual Soil Contamination**

If soil is excavated from the areas with residual contamination, the property owner at the time of excavation will be responsible for the following:
determine if contamination is present

- determine whether the material would be considered solid or hazardous waste •

ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules.

Contaminated soil may be managed in-place, in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. In addition, all current and future property owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site

#### **Maintenance and Audits of Continuing Obligations:**

If compliance with a maintenance plan is required as part of a continuing obligation, an inspection log will need to be filled out periodically, and kept available for inspection by the DNR. Submittal of the inspection log may also be required. You will also need to notify any future owners or occupants of this property of the need to maintain the continuing obligation and to document that maintenance in the inspection log. Periodic audits of these continuing obligations may be conducted by the DNR, to ensure that potential exposure to residual contamination is being addressed. The DNR provides notification before conducting site visits as part of the audit.

## **GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at http://dnr.wi.gov/topic/Brownfields/clean.html. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300-254, is on the internet at http://dnr.wi.gov/topic/wells/documents/3300254.pdf.



#### Notification of Continuing Obligations and Residual Contamination Form 4400-286 (5/15) Page 4 of 4

#### Site Closure:

If the DNR grants closure, you will receive a letter which defines the specific continuing obligations on your property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the **responsible party** or by writing to the DNR contact, at Smith Ralph, Ralph. Smith@wisconsin.gov, (608) 261-6543. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

If you have any questions regarding this notification, I can be reached at: (713) 432-2645 JFRARY@chevron.com

hm

Date Signed 12/4/2015

Signature of responsible party/environmental consultant for the responsible party

Attachments Contact Information Legal Description for each Parcel Parcel Map (Figure 1) Soil Contamination Map (Figure 2) Groundwater Isoconcentration Map (Figure 3)

#### **Factsheets:**

RR 819, Continuing Obligations for Environmental Protection RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov

AFFECTED
Α
PROPERTY J

Notification of Continuing Obligations and Residual Contamination Form 4400-286 (5/15) Page 1 of 7

Notice: Pursuant to s. 292.12(4), Wis. Stats., written notification of parties affected by residual contamination is required. Pursuant to ch. NR 725, Wis. Adm. Code, this form is required to be completed for those sites meeting the criteria in s. NR 725.05 (see below), by a responsible party seeking case closure approval pursuant to ch. NR 726, Wis. Adm. Code or by those persons seeking a remedial action plan approval pursuant to ch. NR 722, Wis. Adm. Code, or by local government units or economic development corporations that are required to take an action pursuant to ch. NR 708, Wis. Adm. Code, when the Department of Natural Resources (DNR) determines that notification is necessary. Personally identifiable information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law (ss. 19.31-19.39, Wis. Stats.). (Unless otherwise noted, citations refer to Wis. Adm. Code.)

Note: A copy of each completed form must also be submitted to the WI Department of Natural Resources, in accordance with s. NR 726.09 (3), Wis. Adm. Code.

#### **Directions:**

- 1. Include the first page of this form, **Contact Information**, as an attachment with all notifications sent using Sections A and B. (*Filling out the Contact Information page allows for automatic entry of the contact information within the letter.*)
- 2. To notify affected parties about residual contamination and continuing obligations, use the appropriate section (A, B or C), based on the type of property to which the required notification is to be sent, per s. NR 725.05 and 725.07, Wis. Adm. Code:

Section A: Deeded Properties Section B: Right-of-Way (ROW) - non-Department of Transportation Section C: Department of Transportation (DOT) ROW

- 3. Select and use the applicable paragraphs, based on the types of residual contamination and continuing obligations for the specific property. For the "Residual Contamination" and "Continuing Obligations on Your Property" sections, the applicable language will appear upon selection of the checkboxes.
- 4. Include the information requested within each paragraph. If requesting remedial action plan approval, or if the Department has directed a local governmental unit to take an action at a site, modify the language regarding a "closure request" to reflect the appropriate situation ("remedial action plan approval" or a "liability clarification letter").
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- groundwater contamination that attains or exceeds applicable standards remains upon completion of the remedial action
- soil contamination that attains or exceeds applicable standards remains upon completion of the remedial action,
- one or more monitoring wells have not been located for abandonment (fill and seal), or
- one or more monitoring wells will be kept for future monitoring, Do not use this option if the well/s are to be transferred to another site for continued monitoring. That will be addressed in the final closure letter, upon documentation that responsibility for the well/s has been accepted by the responsible party for the other site.
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- a structural impediment (generally a building or other type of structure) prevented completion of a site investigation or remedial action. *This may also apply to site-specific situations which prevent a complete investigation or cleanup, such as an overhead power lines. Contact the agency with administrative authority first for site-specific situations.*
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- (vapor) compounds of concern will continue to be used in facility operations after closure. Notification is provided to the current owner of the source property when that person is not the responsible party conducting the cleanup. Because the compound of concern is still in use, complete investigation of the vapor pathway may be impracticable, and cleanup may be limited in effectiveness as well.
- (vapor) a dewatering system needs to be operated and maintained in order for the vapor mitigation system (VMS) to work effectively.
   Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where a vapor mitigation system is necessary and a dewatering system is necessary to enable the vapor mitigation system to operate effectively, due to the hydrogeology. (Used in conjunction with the VMS option)
- (vapor) vapor inhalation exposure assumptions for a non-residential setting will be applied for closure. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where residential vapor action levels are exceeded, including at properties used for commercial or industrial purposes.
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This is especially important in cases where elevated residual soil concentrations or large volumes of soil contaminated with volatile compounds remain. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where vapors may pose a health issue if buildings are to be constructed in the future, or if other land use changes or actions could result in a completed vapor pathway. This includes expansion or reconstruction of existing buildings.

The Department may also require a condition based on site-specific circumstances. In this case, consult with the project manager to determine what specific information to include in the notification of any affected property owner or right-of-way holder. *This has been used in limited situations where actions such as methane monitoring or fencing were required.* 

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- the owner of each property within or partially within the contaminated site or facility boundaries, other than properties owned by the responsible party,
- occupants of affected properties, as appropriate, (consult with the project manager if you have questions)
- the clerk of the county, town, village or city in which an affected public street or highway ROW is located, and municipal department or state agency that is responsible for the maintaining the public street or highway,
- the railroad that maintains the railroad right of way, and
- the owner of each property where a monitoring well will remain, for future abandonment or continued monitoring.

A summary of the notifications sent is to be provided in the case closure request form (4400-202). The attachment for "Notifications to Owners of Affected Properties", in Form 4400-202 includes a summary table of all notifications sent to all property owners or occupants of affected properties and to holders of affected ROWs, a copy of each letter sent, and a proof of receipt for each letter.

**Note:** A response to a closure request cannot be provided until at least 30 days after this notification letter has been sent. Documentation that this letter has been sent must be provided to the agency with administrative authority for an approval or decision under ch. NR 726, Wis. Adm. Code.



#### List of Potential Attachments:

(list all attachments to be included; include name of attachment and figure numbers)

#### Maps

Section A

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Location of Cover in relation to the extent of contamination (Maintenance of a Cover)

Location of Cover in relation to the extent of contamination ( Maintenance of a Cover)

Section B

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Section C:

Groundwater Isoconcentration Map Soil Isoconcentration Map

#### Maintenance plan

Section A

Maintenance of Plan - (Maintenance of a cover, Barrier, and/or Vapor Mitigation System)

#### Factsheets:

Section A

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property

#### Section B

Groundwater RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property



#### The affected property is:

- O the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- a deeded property affected by contamination from the source property
- a right-of-way (ROW)
- a Department of Transportation (DOT) ROW

Include this completed page as an attachment with all notifications provided under sections A and B.

### **Contact Information**

Responsible Party: The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Chevron Environmental Management Company (Chevron)

Contact Person Last Name	First		MI	Phone Num	oer (inc	lude area code)
Frary	John		R	(71	3) 432	2-2645
Address		City			State	ZIP Code
4800 Fournace Place		Bellaire			ΤХ	77401
E-mail JFRARY@chevron.com						

#### Name of Party Receiving Notification:

Business Name, if applicable: Jones Lang LaSalle Americas, Inc.

Title	Last Name	First		MI	Phone Num	ber (inc	lude area code)
Ms.	Heyen	Julie					
Addres	is is it is a second seco	·	City			State	ZIP Code
4105	Lexington Avenue North, Suite 200		Arden Hills			MN	55126

#### Site Name and Source Property Information:

Site (Activity) Name Unocal Superior Terminal			
Address	City	State	ZIP Code
2301 Winter Street, Room E540B	Superior	WI	54880
DNR ID # (BRRTS#) 03-16-000145	(DATCP) ID #		

#### **Contacts for Questions:**

# If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

### **Environmental Consultant:** AECOM

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Tarara	Andrew			(61	12) 376	5-2452
Address		City		-	State	ZIP Code
800 LaSalle Avenue S, Suite 500		Minneapolis			MN	55402
E-mail andrew.tarara@aecom.com						

#### **Department Contact:**

#### To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City			State	ZIP Code		
107 Sutliff Ave		Rhinelander			WI	54501		
Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)		
Ralph	Smith			(60	08) 261	1-6543		
E-mail (Firstname.Lastname@wisconsin.gov) Ralph Smith@wisconsin.gov								



#### Section A: Deeded Property Notification: Residual Contamination and/or Continuing Obligations

# **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

4105 Lexington Avenue North, Suite 200 Arden Hills, MN, 55126

Dear Ms. Heyen:

I am providing this letter to inform you of the location and extent of contamination remaining on your property, and of certain long-term responsibilities (continuing obligations) for which you may become responsible. I have investigated a release of:

No. 2 fuel oil and gasoline that occurred from the former Unocal Terminal

on 2301 Winter Street, Room E540B, Superior, WI, 54880 that has shown that contamination has migrated onto your property.

I have responded to the release and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

#### You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

Please review the enclosed legal description of your property, and notify Andrew Tarara at 800 LaSalle Avenue S. Suite 500, Minneapolis, MN, 55402 within the next 30 days if the legal description is incorrect.

The DNR will not review my closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information that is relevant to this closure request, or if you want to waive the 30 day comment period, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Ralph.Smith@wisconsin.gov.

# Your Long-Term Responsibilities as a Property Owner and Occupant:

The responses included

remediation of impacted soil to concentrations below industrial direct-contact standards in at least the top 4 feet at the site by Chevron Environmental Management Company (Chevron), the current lessee of the source property. The continuing obligations I am proposing that affect your property are listed below, under the heading **Continuing Obligations**. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "Continuing Obligations for Environmental Protection" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf.

# Contract for responsibility for continuing obligation:

Before I request closure, I will need to inform the DNR as to whom will be responsible for the continuing obligation/s on your property.

BNSF, as the property lessor, will be responsible for the continuing obligations on the property.



# Notification of Continuing Obligations and Residual Contamination

Form 4400-286 (5/15)

Page 2 of 3

Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for the continuing obligations on your Property, you may request additional time from the DNR contact identified in **Contact Information**.

(Note: Future property owners would need to negotiate a new agreement.)

#### Groundwater Contamination:

Groundwater contamination originated at the property located at 2301 Winter Street, Room E540B, Superior, WI, 54880.

Contaminated groundwater has migrated onto your property at:

BNSF Parcel No. 04-804-01077-00.

The levels of

benzene

contamination in the groundwater on your property are above the state groundwater enforcement standards found in ch. NR 140, Wis. Adm. Code.

However, the environmental consultants who have investigated this contamination have informed me that this groundwater contaminant plume is stable or receding and will naturally degrade over time. I believe that allowing natural attenuation, or the breakdown of contaminants in groundwater due to naturally occurring processes, to complete the cleanup at this site will meet the case closure requirements of ch. NR 726, Wis. Adm. Code. As part of my request for case closure, I am requesting that the DNR accept natural attenuation as the final remedy for this site.

The following DNR fact sheet (RR 671, "What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater") has been included with this notification, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <u>http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf</u>.

**Continuing Obligations on Your Property:** As part of the cleanup, I am proposing that the following continuing obligations be used at your property, to address future exposure to residual contamination. If my closure request is approved, you will be responsible for the following continuing obligations.

To construct a new well or to reconstruct an existing well, the property owner at the time of construction or reconstruction will need to obtain prior approval from the DNR. See the paragraph **GIS Registry and Well Construction Requirements**. Typically, this results in casing off a portion of the aquifer during drilling, when needed, to protect the water supply.



### Maintenance and Audits of Continuing Obligations:

If compliance with a maintenance plan is required as part of a continuing obligation, an inspection log will need to be filled out periodically, and kept available for inspection by the DNR. Submittal of the inspection log may also be required. You will also need to notify any future owners or occupants of this property of the need to maintain the continuing obligation and to document that maintenance in the inspection log. Periodic audits of these continuing obligations may be conducted by the DNR, to ensure that potential exposure to residual contamination is being addressed. The DNR provides notification before conducting site visits as part of the audit.

### **GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at <u>http://dnr.wi.gov/topic/Brownfields/clean.html</u>. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300–254, is on the internet at <a href="http://dnr.wi.gov/topic/wells/documents/3300254.pdf">http://dnr.wi.gov/topic/wells/documents/3300254.pdf</a>.

#### Site Closure:

If the DNR grants closure, you will receive a letter which defines the specific continuing obligations on your property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the **responsible party** or by writing to the DNR contact, at Smith Ralph. Smith@wisconsin.gov, (608) 261-6543. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

If you have any questions regarding this notification, I can be reached at: (713) 432-2645

JFRARY@chevron.com

Date Signed 12/4/2015

Signature of responsible party/environmental consultant for the responsible party

Attachments Contact Information Legal Description for each Parcel Parcel Map Groundwater Isoconcentration Map

# **Factsheets:**

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

Save	Print	Clear Data

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov



Notification of Continuing Obligations and Residual Contamination Form 4400-286 (5/15) Page 1 of 7

Notice: Pursuant to s. 292.12(4), Wis. Stats., written notification of parties affected by residual contamination is required. Pursuant to ch. NR 725, Wis. Adm. Code, this form is required to be completed for those sites meeting the criteria in s. NR 725.05 (see below), by a responsible party seeking case closure approval pursuant to ch. NR 726, Wis. Adm. Code or by those persons seeking a remedial action plan approval pursuant to ch. NR 722, Wis. Adm. Code, or by local government units or economic development corporations that are required to take an action pursuant to ch. NR 708, Wis. Adm. Code, when the Department of Natural Resources (DNR) determines that notification is necessary. Personally identifiable information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law (ss. 19.31-19.39, Wis. Stats.). (Unless otherwise noted, citations refer to Wis. Adm. Code.)

Note: A copy of each completed form must also be submitted to the WI Department of Natural Resources, in accordance with s. NR 726.09 (3), Wis. Adm. Code.

#### **Directions:**

- 1. Include the first page of this form, **Contact Information**, as an attachment with all notifications sent using Sections A and B. (*Filling out the Contact Information page allows for automatic entry of the contact information within the letter.*)
- To notify affected parties about residual contamination and continuing obligations, use the appropriate section (A, B or C), based on the type of property to which the required notification is to be sent, per s. NR 725.05 and 725.07, Wis. Adm. Code:

Section A: Deeded Properties Section B: Right-of-Way (ROW) - non-Department of Transportation Section C: Department of Transportation (DOT) ROW

- 3. Select and use the applicable paragraphs, based on the types of residual contamination and continuing obligations for the specific property. For the "Residual Contamination" and "Continuing Obligations on Your Property" sections, the applicable language will appear upon selection of the checkboxes.
- 4. Include the information requested within each paragraph. If requesting remedial action plan approval, or if the Department has directed a local governmental unit to take an action at a site, modify the language regarding a "closure request" to reflect the appropriate situation ("remedial action plan approval" or a "liability clarification letter").
- 5. Once completed, print the form for mailing.
- 6. Under s. NR 725.07, Wis. Adm. Code, notification letters under section A and B are required to be sent via certified mail, return receipt requested, or priority mail with signature confirmation. If the notifications are sent via priority mail with signature confirmation, you may use the signature waiver option if you have reason to believe that the owner of the property or other recipient may refuse to sign for the notification.

#### Situations for Which Notifications are Required:

Under s. NR 725.07, Wis. Adm. Code, notification is required for the following situations:

- groundwater contamination that attains or exceeds applicable standards remains upon completion of the remedial action
- soil contamination that attains or exceeds applicable standards remains upon completion of the remedial action,
- one or more monitoring wells have not been located for abandonment (fill and seal), or
- one or more monitoring wells will be kept for future monitoring, Do not use this option if the well/s are to be transferred to another site for continued monitoring. That will be addressed in the final closure letter, upon documentation that responsibility for the well/s has been accepted by the responsible party for the other site.
- a cover (which may include soil covers, pavement, engineered cover, foundations) was used to address exposure by either direct contact or the groundwater pathway,
- a structural impediment (generally a building or other type of structure) prevented completion of a site investigation or remedial action. *This may also apply to site-specific situations which prevent a complete investigation or cleanup, such as an overhead power lines. Contact the agency with administrative authority first for site-specific situations.*
- soil contamination has only been cleaned up to industrial residual contaminant levels, and the property's land use has been classified as industrial under ch. NR 720,
- (vapor) the continued operation of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owners when sub-slab vapor risk screening levels are exceeded, and the operation and maintenance of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion.



- (vapor) compounds of concern will continue to be used in facility operations after closure. Notification is provided to the current owner of the source property when that person is not the responsible party conducting the cleanup. Because the compound of concern is still in use, complete investigation of the vapor pathway may be impracticable, and cleanup may be limited in effectiveness as well.
- (vapor) a dewatering system needs to be operated and maintained in order for the vapor mitigation system (VMS) to work effectively.
   Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where a vapor mitigation system is necessary and a dewatering system is necessary to enable the vapor mitigation system to operate effectively, due to the hydrogeology. (Used in conjunction with the VMS option)
- (vapor) vapor inhalation exposure assumptions for a non-residential setting will be applied for closure. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where residential vapor action levels are exceeded, including at properties used for commercial or industrial purposes.
- (vapor) contamination in soil or groundwater from volatile compounds remains after completion of the remedial action, that could lead to vapor intrusion upon new construction, reconstruction or occupation of an existing building.

This is especially important in cases where elevated residual soil concentrations or large volumes of soil contaminated with volatile compounds remain. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where vapors may pose a health issue if buildings are to be constructed in the future, or if other land use changes or actions could result in a completed vapor pathway. This includes expansion or reconstruction of existing buildings.

The Department may also require a condition based on site-specific circumstances. In this case, consult with the project manager to determine what specific information to include in the notification of any affected property owner or right-of-way holder. *This has been used in limited situations where actions such as methane monitoring or fencing were required.* 

#### **Parties Receiving Notifications:**

Under s. NR 725.05, Wis. Adm. Code, notification must be provided to:

- the owner of each property within or partially within the contaminated site or facility boundaries, other than properties owned by the responsible party,
- occupants of affected properties, as appropriate, (consult with the project manager if you have questions)
- the clerk of the county, town, village or city in which an affected public street or highway ROW is located, and municipal department or state agency that is responsible for the maintaining the public street or highway,
- the railroad that maintains the railroad right of way, and
- the owner of each property where a monitoring well will remain, for future abandonment or continued monitoring.

A summary of the notifications sent is to be provided in the case closure request form (4400-202). The attachment for "Notifications to Owners of Affected Properties", in Form 4400-202 includes a summary table of all notifications sent to all property owners or occupants of affected properties and to holders of affected ROWs, a copy of each letter sent, and a proof of receipt for each letter.

**Note:** A response to a closure request cannot be provided until at least 30 days after this notification letter has been sent. Documentation that this letter has been sent must be provided to the agency with administrative authority for an approval or decision under ch. NR 726, Wis. Adm. Code.



#### List of Potential Attachments:

(list all attachments to be included; include name of attachment and figure numbers)

#### Maps

Section A

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells)

Location of Cover in relation to the extent of contamination (Maintenance of a Cover)

# Section B

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Section C:

Groundwater Isoconcentration Map Soil Isoconcentration Map

#### Maintenance plan

Section A

Maintenance of Plan - (Maintenance of a cover, Barrier, and/or Vapor Mitigation System)

#### Factsheets:

Section A

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property

#### Section B

Groundwater RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property



#### The affected property is:

- O the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- a deeded property affected by contamination from the source property
- a right-of-way (ROW)
- a Department of Transportation (DOT) ROW

Include this completed page as an attachment with all notifications provided under sections A and B.

#### **Contact Information**

Responsible Party: The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Chevron Environmental Management Company (Chevron)

Contact Person Last Name	First		MI	Phone Num	ber (incl	ude area code)
Frary	John		R	(71	3) 432	-2645
Address		City			State	ZIP Code
4800 Fournace Place, Room E540B		Bellaire			ΤХ	77401
E-mail JFRARY@chevron.com						

#### Name of Party Receiving Notification:

Business Name, if applicable: Jones Lang LaSalle Americas, Inc.

Title	Last Name	First		MI	Phone Num	ber (inc	lude area code)
Ms.	Heyen	Julie					
Addres	is is it is a second seco	·	City			State	ZIP Code
4105	Lexington Avenue North, Suite 200		Arden Hills			MN	55126

#### Site Name and Source Property Information:

Site (Activity) Name Unocal Superior Terminal					
Address	С	lity	Sta	ate	ZIP Code
2301 Winter Street	S	uperior	W	Ί	54880
DNR ID # (BRRTS#) 03-16-000145	(DATCP)	) ID #			

#### **Contacts for Questions:**

# If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

### **Environmental Consultant: AECOM**

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Tarara	Andrew			(61	12) 376	5-2452
Address		City			State	ZIP Code
800 LaSalle Avenue South, Suite 500		Minneapolis			MN	55402
E-mail andrew.tarara@aecom.com						

#### **Department Contact:**

#### To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City			State	ZIP Code	
107 Sutliff Ave		Rhinelander			WI	54501	
Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)	
Ralph	Smith			(60	08) 261	-6543	
E-mail (Firstname.Lastname@wisconsin.gov) Ralph Smith@wisconsin gov							

AFFECTED C PROPERTY

#### Section A: Deeded Property Notification: Residual Contamination and/or Continuing Obligations

# **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

4105 Lexington Avenue North, Suite 200 Arden Hills, MN, 55126

Dear Ms. Heyen:

I am providing this letter to inform you of the location and extent of contamination remaining on your property, and of certain long-term responsibilities (continuing obligations) for which you may become responsible. I have investigated a release of:

No. 2 fuel oil and gasoline that occurred from the former Unocal Terminal

on 2301 Winter Street, Superior, WI, 54880 that has shown that contamination has migrated onto your property. I have responded to the release and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

# You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

Please review the enclosed legal description of your property, and notify Andrew Tarara at 800 LaSalle Avenue South, Suite 500, Minneapolis, MN, 55402 within the next 30 days if the legal description is incorrect.

The DNR will not review my closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information that is relevant to this closure request, or if you want to waive the 30 day comment period, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Ralph.Smith@wisconsin.gov.

#### Your Long-Term Responsibilities as a Property Owner and Occupant:

#### The responses included

remediation of impacted soil to concentrations below industrial direct-contact standards in at least the top 4 feet at the site by Chevron Environmental Management Company (Chevron), the current lessee of the source property. The continuing obligations I am proposing that affect your property are listed below, under the heading **Continuing Obligations**. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "Continuing Obligations for Environmental Protection" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf</a>.

#### Contract for responsibility for continuing obligation:

Before I request closure, I will need to inform the DNR as to whom will be responsible for the continuing obligation/s on your property.

BNSF, as the property lessor of the affected property (Parcel No. 04-804-01036-00), will be responsible for the continuing obligations on the property.

Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for the continuing obligations on your Property, you may request additional time from the DNR contact identified in **Contact Information**.

(Note: Future property owners would need to negotiate a new agreement.)



### **Remaining Contamination:**

### Groundwater Contamination:

Groundwater contamination originated at the property located at 2301 Winter Street, Superior, WI, 54880. Contaminated groundwater has migrated onto your property at:

Parcel No. 04-804-01036-00 (located immediately north of the western parcel, No. 04-804-01035-00 of the source property).

The levels of

benzene

contamination in the groundwater on your property are above the state groundwater enforcement standards found in ch. NR 140, Wis. Adm. Code.

**Continuing Obligations on Your Property:** As part of the cleanup, I am proposing that the following continuing obligations be used at your property, to address future exposure to residual contamination. If my closure request is approved, you will be responsible for the following continuing obligations.

To construct a new well or to reconstruct an existing well, the property owner at the time of construction or reconstruction will need to obtain prior approval from the DNR. See the paragraph **GIS Registry and Well Construction Requirements**. Typically, this results in casing off a portion of the aquifer during drilling, when needed, to protect the water supply.

#### Site specific condition

Groundwater impacts were observed on the northern edge of the adjacent parcel (04-804-01035-00), located just south of the site property. A concrete secondary containment for the previous onsite ASTs was still in place and submerged under an unknown depth of water, impeding further investigation. No follow-up attempts were made to investigate soil or groundwater conditions on the Calumet property.

# Maintenance and Audits of Continuing Obligations:

If compliance with a maintenance plan is required as part of a continuing obligation, an inspection log will need to be filled out periodically, and kept available for inspection by the DNR. Submittal of the inspection log may also be required. You will also need to notify any future owners or occupants of this property of the need to maintain the continuing obligation and to document that maintenance in the inspection log. Periodic audits of these continuing obligations may be conducted by the DNR, to ensure that potential exposure to residual contamination is being addressed. The DNR provides notification before conducting site visits as part of the audit.



### **GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at <u>http://dnr.wi.gov/topic/Brownfields/clean.html</u>. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300–254, is on the internet at <a href="http://dnr.wi.gov/topic/wells/documents/3300254.pdf">http://dnr.wi.gov/topic/wells/documents/3300254.pdf</a>.

#### Site Closure:

If the DNR grants closure, you will receive a letter which defines the specific continuing obligations on your property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the **responsible party** or by writing to the DNR contact, at Smith Ralph. Smith@wisconsin.gov, (608) 261-6543. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

If you have any questions regarding this notification, I can be reached at: (713) 432-2645 JFRARY@chevron.com

Date Signed 12/4/2015

Signature of responsible party/environmental consultant for the responsible party

Attachments

Contact Information Legal Description for each Parcel Parcel Map Groundwater Isoconcentration Map

**Factsheets:** 

RR 819, Continuing Obligations for Environmental Protection RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater 
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 trackingupdates@fedex.com

 To:
 Lanning, Amanda

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All weights are estimated.

To track the latest status of your shipment, click on the tracking number above, or go to fedex.com.

This tracking update has been sent to you by FedEx at your request. FedEx does not validate the authenticity of the requestor and does not validate, guarantee or warrant the authenticity of the request, the requestor's message, or the accuracy of this tracking update. For tracking results and terms of use, go to <u>fedex.com</u>.

Save	Print	Clear Data

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov



#### Notification of Continuing Obligations and Residual Contamination Form 4400-286 (5/15) Page 1 of 7

Notice: Pursuant to s. 292.12(4), Wis. Stats., written notification of parties affected by residual contamination is required. Pursuant to ch. NR 725, Wis. Adm. Code, this form is required to be completed for those sites meeting the criteria in s. NR 725.05 (see below), by a responsible party seeking case closure approval pursuant to ch. NR 726, Wis. Adm. Code or by those persons seeking a remedial action plan approval pursuant to ch. NR 722, Wis. Adm. Code, or by local government units or economic development corporations that are required to take an action pursuant to ch. NR 708, Wis. Adm. Code, when the Department of Natural Resources (DNR) determines that notification is necessary. Personally identifiable information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law (ss. 19.31-19.39, Wis. Stats.). (Unless otherwise noted, citations refer to Wis. Adm. Code.)

Note: A copy of each completed form must also be submitted to the WI Department of Natural Resources, in accordance with s. NR 726.09 (3), Wis. Adm. Code.

#### **Directions:**

- 1. Include the first page of this form, **Contact Information**, as an attachment with all notifications sent using Sections A and B. (*Filling out the Contact Information page allows for automatic entry of the contact information within the letter.*)
- 2. To notify affected parties about residual contamination and continuing obligations, use the appropriate section (A, B or C), based on the type of property to which the required notification is to be sent, per s. NR 725.05 and 725.07, Wis. Adm. Code:

Section A: Deeded Properties Section B: Right-of-Way (ROW) - non-Department of Transportation Section C: Department of Transportation (DOT) ROW

- 3. Select and use the applicable paragraphs, based on the types of residual contamination and continuing obligations for the specific property. For the "Residual Contamination" and "Continuing Obligations on Your Property" sections, the applicable language will appear upon selection of the checkboxes.
- 4. Include the information requested within each paragraph. If requesting remedial action plan approval, or if the Department has directed a local governmental unit to take an action at a site, modify the language regarding a "closure request" to reflect the appropriate situation ("remedial action plan approval" or a "liability clarification letter").
- 5. Once completed, print the form for mailing.
- 6. Under s. NR 725.07, Wis. Adm. Code, notification letters under section A and B are required to be sent via certified mail, return receipt requested, or priority mail with signature confirmation. If the notifications are sent via priority mail with signature confirmation, you may use the signature waiver option if you have reason to believe that the owner of the property or other recipient may refuse to sign for the notification.

#### Situations for Which Notifications are Required:

Under s. NR 725.07, Wis. Adm. Code, notification is required for the following situations:

- groundwater contamination that attains or exceeds applicable standards remains upon completion of the remedial action
- soil contamination that attains or exceeds applicable standards remains upon completion of the remedial action,
- one or more monitoring wells have not been located for abandonment (fill and seal), or
- one or more monitoring wells will be kept for future monitoring, Do not use this option if the well/s are to be transferred to another site for continued monitoring. That will be addressed in the final closure letter, upon documentation that responsibility for the well/s has been accepted by the responsible party for the other site.
- a cover (which may include soil covers, pavement, engineered cover, foundations) was used to address exposure by either direct contact or the groundwater pathway,
- a structural impediment (generally a building or other type of structure) prevented completion of a site investigation or remedial action. *This may also apply to site-specific situations which prevent a complete investigation or cleanup, such as an overhead power lines. Contact the agency with administrative authority first for site-specific situations.*
- soil contamination has only been cleaned up to industrial residual contaminant levels, and the property's land use has been classified as industrial under ch. NR 720,
- (vapor) the continued operation of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owners when sub-slab vapor risk screening levels are exceeded, and the operation and maintenance of a vapor mitigation system is necessary in order to limit or prevent vapor intrusion.



- (vapor) compounds of concern will continue to be used in facility operations after closure. Notification is provided to the current owner of the source property when that person is not the responsible party conducting the cleanup. Because the compound of concern is still in use, complete investigation of the vapor pathway may be impracticable, and cleanup may be limited in effectiveness as well.
- (vapor) a dewatering system needs to be operated and maintained in order for the vapor mitigation system (VMS) to work effectively.
   Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where a vapor mitigation system is necessary and a dewatering system is necessary to enable the vapor mitigation system to operate effectively, due to the hydrogeology. (Used in conjunction with the VMS option)
- (vapor) vapor inhalation exposure assumptions for a non-residential setting will be applied for closure. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where residential vapor action levels are exceeded, including at properties used for commercial or industrial purposes.
- (vapor) contamination in soil or groundwater from volatile compounds remains after completion of the remedial action, that could lead to vapor intrusion upon new construction, reconstruction or occupation of an existing building.

This is especially important in cases where elevated residual soil concentrations or large volumes of soil contaminated with volatile compounds remain. Notification is provided to the current property owner when that person is not the responsible party conducting the cleanup, and to any other property owner where vapors may pose a health issue if buildings are to be constructed in the future, or if other land use changes or actions could result in a completed vapor pathway. This includes expansion or reconstruction of existing buildings.

The Department may also require a condition based on site-specific circumstances. In this case, consult with the project manager to determine what specific information to include in the notification of any affected property owner or right-of-way holder. *This has been used in limited situations where actions such as methane monitoring or fencing were required.* 

# **Parties Receiving Notifications:**

Under s. NR 725.05, Wis. Adm. Code, notification must be provided to:

- the owner of each property within or partially within the contaminated site or facility boundaries, other than properties owned by the responsible party,
- occupants of affected properties, as appropriate, (consult with the project manager if you have questions)
- the clerk of the county, town, village or city in which an affected public street or highway ROW is located, and municipal department or state agency that is responsible for the maintaining the public street or highway,
- the railroad that maintains the railroad right of way, and
- the owner of each property where a monitoring well will remain, for future abandonment or continued monitoring.

A summary of the notifications sent is to be provided in the case closure request form (4400-202). The attachment for "Notifications to Owners of Affected Properties", in Form 4400-202 includes a summary table of all notifications sent to all property owners or occupants of affected properties and to holders of affected ROWs, a copy of each letter sent, and a proof of receipt for each letter.

**Note:** A response to a closure request cannot be provided until at least 30 days after this notification letter has been sent. Documentation that this letter has been sent must be provided to the agency with administrative authority for an approval or decision under ch. NR 726, Wis. Adm. Code.



#### List of Potential Attachments:

(list all attachments to be included; include name of attachment and figure numbers)

#### Maps

Section A

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells)

Location of Cover in relation to the extent of contamination (Maintenance of a Cover)

Section B

Monitoring Well Location Map - (Filling & Sealing, Continue Sampling of Wells) Section C:

Groundwater Isoconcentration Map Soil Isoconcentration Map

#### Maintenance plan

Section A

Maintenance of Plan - (Maintenance of a cover, Barrier, and/or Vapor Mitigation System)

#### Factsheets:

Section A

RR 819, Continuing Obligations for Environmental Protection

RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property

#### Section B

Groundwater RR 892, Vapor Intrusion: What to Expect if Vapor Intrusion from Soil and Groundwater Contamination Exist on My Property



#### The affected property is:

- O the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- a deeded property affected by contamination from the source property
- a right-of-way (ROW)
- a Department of Transportation (DOT) ROW

Include this completed page as an attachment with all notifications provided under sections A and B.

### **Contact Information**

Responsible Party: The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Chevron Environmental Management Company (Chevron)

Contact Person Last Name	First		MI	Phone Num	ber (incl	ude area code)
Frary	John		R	(71	3) 432	-2645
Address		City			State	ZIP Code
4800 Fournace Place		Bellaire			ΤХ	77401
E-mail JFRARY@chevron.com						

#### Name of Party Receiving Notification:

Business Name, if applicable: Union Pacific Railroad

Title	Last Name	First		MI	Phone Num	ber (inc	lude area code)
Mr.	Hammond	W. Lee					
Addres	ŝS		City			State	ZIP Code
1400 1	Douglas Street, STOP 1030		Omaha			NE	68179

#### Site Name and Source Property Information:

Site (Activity) Name Unocal Superior Terminal		
Address	City	State ZIP Code
2301 Winter Street, Room E540B	Superior	WI 54880
DNR ID # (BRRTS#) 03-16-000145	(DATCP) ID #	

#### **Contacts for Questions:**

# If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

### **Environmental Consultant:** AECOM

Contact Person Last Name	First		MI	Phone Num	ber (inc	lude area code)
Tarara	Andrew			(61	12) 376	5-2452
Address		City			State	ZIP Code
800 LaSalle Avenue S, Suite 500		Minneapolis			MN	55402
E-mail and rew.tarara@aecom.com						

#### **Department Contact:**

#### To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City			State	ZIP Code
107 Sutliff Ave		Rhinelander			WI	54501
Contact Person Last Name	First		MI	Phone Number (include area code)		
Ralph	Smith		(608) 261-6543			
E-mail (Firstname.Lastname@wisconsin.gov) R	alph.Smith@wisconsin.go	ov				



#### Section A: Deeded Property Notification: Residual Contamination and/or Continuing Obligations

# **KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

1400 Douglas Street, STOP 1030 Omaha, NE, 68179

Dear Mr. Hammond:

I am providing this letter to inform you of the location and extent of contamination remaining on your property, and of certain long-term responsibilities (continuing obligations) for which you may become responsible. I have investigated a release of:

No. 2 fuel oil and gasoline that occurred from the former Unocal Terminal

on 2301 Winter Street, Room E540B, Superior, WI, 54880 that has shown that contamination has migrated onto your property.

I have responded to the release and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

# You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

Please review the enclosed legal description of your property, and notify Andrew Tarara at 800 LaSalle Avenue S, Suite 500, Minneapolis, MN, 55402 within the next 30 days if the legal description is incorrect.

The DNR will not review my closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information that is relevant to this closure request, or if you want to waive the 30 day comment period, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Ralph.Smith@wisconsin.gov.

# Your Long-Term Responsibilities as a Property Owner and Occupant:

The responses included

remediation of impacted soil to concentrations below industrial direct-contact standards in at least the top 4 feet at the site by Chevron Environmental Management Company (Chevron), the current lessee of the source property. The continuing obligations I am proposing that affect your property are listed below, under the heading **Continuing Obligations**. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "Continuing Obligations for Environmental Protection" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf</a>.

# Contract for responsibility for continuing obligation:

Before I request closure, I will need to inform the DNR as to whom will be responsible for the continuing obligation/s on your property.

As partial owners of one of source property's parcels (No. 04-804-00977-00), BNSF (4/6th ownership), Union Pacific Railroad (1/6th ownership), and Canadian Pacific (1/6th ownership) will jointly be responsible for the continuing obligations on the property.



#### Notification of Continuing Obligations and Residual Contamination Form 4400-286 (5/15)

Page 2 of 3

Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for the continuing obligations on your Property, you may request additional time from the DNR contact identified in **Contact** Information.

(Note: Future property owners would need to negotiate a new agreement.)

#### **Remaining Contamination:**

Groundwater Contamination:

Groundwater contamination originated at the property located at 2301 Winter Street, Room E540B, Superior, WI, 54880

Contaminated groundwater has migrated onto your property at:

Parcel No. 04-804-01077-00

The levels of

benzene

contamination in the groundwater on your property are above the state groundwater enforcement standards found in ch. NR 140, Wis. Adm. Code.

However, the environmental consultants who have investigated this contamination have informed me that this groundwater contaminant plume is stable or receding and will naturally degrade over time. I believe that allowing natural attenuation, or the breakdown of contaminants in groundwater due to naturally occurring processes, to complete the cleanup at this site will meet the case closure requirements of ch. NR 726, Wis. Adm. Code. As part of my request for case closure, I am requesting that the DNR accept natural attenuation as the final remedy for this site.

The following DNR fact sheet (RR 671, "What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater") has been included with this notification, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <u>http://dnr.wi.gov/files/PDF/</u> pubs/rr/RR671.pdf.

**Continuing Obligations on Your Property:** As part of the cleanup, I am proposing that the following continuing obligations be used at your property, to address future exposure to residual contamination. If my closure request is approved, you will be responsible for the following continuing obligations.

To construct a new well or to reconstruct an existing well, the property owner at the time of construction or reconstruction will need to obtain prior approval from the DNR. See the paragraph GIS Registry and Well **Construction Requirements.** Typically, this results in casing off a portion of the aquifer during drilling, when needed, to protect the water supply.



### Maintenance and Audits of Continuing Obligations:

If compliance with a maintenance plan is required as part of a continuing obligation, an inspection log will need to be filled out periodically, and kept available for inspection by the DNR. Submittal of the inspection log may also be required. You will also need to notify any future owners or occupants of this property of the need to maintain the continuing obligation and to document that maintenance in the inspection log. Periodic audits of these continuing obligations may be conducted by the DNR, to ensure that potential exposure to residual contamination is being addressed. The DNR provides notification before conducting site visits as part of the audit.

### **GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at <u>http://dnr.wi.gov/topic/Brownfields/clean.html</u>. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300–254, is on the internet at <a href="http://dnr.wi.gov/topic/wells/documents/3300254.pdf">http://dnr.wi.gov/topic/wells/documents/3300254.pdf</a>.

#### Site Closure:

If the DNR grants closure, you will receive a letter which defines the specific continuing obligations on your property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the **responsible party** or by writing to the DNR contact, at Smith Ralph. Smith@wisconsin.gov, (608) 261-6543. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

If you have any questions regarding this notification, I can be reached at: (713) 432-2645

JFRARY@chevron.com

Date Signed 12/4/2015

Signature of responsible party/environmental consultant for the responsible party

Attachments Contact Information Legal Description for each Parcel Parcel Map Groundwater Isoconcentration Map

# **Factsheets:**

RR 819, Continuing Obligations for Environmental Protection RR 671, What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater



BY

BY H. McDonald

R.J. Seeley

FEE
, <b>77.25(15</b> )
EXEMPT

All of Lot number 5 in Block numbered 73 in the Townsite of West Superior, First Division, being of the Subdivision of Lot A of said First AFFECTED A PROPERTY

~ prole

12

**E** 557 **ME** 259

hundred and thirty nine (139) feet to a point which is the place of beginning: thence due North three thousand three hundred and forty & 89/100 (3340 89/100) feet to the established dock line in St. Louis Bay, thence along said dock line South Westerly one hundred and thirteen & 27/100 (113 27/100) feet, thence due South three thousand two hundred and eighty six & 49/100 (3286 49/100) feet, and thence East along the South Section line of said Section Ten (10) one hundred (100) feet to the place of beginning.

Also the following described real estate situated in the said County of Douglas to wit: Commencing at the North East corner of the North West quarter of Section Fifteen (15) in Township Forty Nine (49) North of Range Fourteen (14) West and thence running West along the North section line of said Section Fifteen (15) one hundred and thirty nine (139) feet to a point which is the place of beginning: thence due South two thousand six hundred and twenty nine & 68/100 (2629 68/100) feet, thence due West eight hundred and seventy six (876) feet, thence due North four hundred (400) feet, thence due East seven hundred and thirty & 89/100 (2230 89/100) feet, and thence East along the North section line of said Section Fifteen (15) one hundred (100) feet to the place of beginning.

Also the following described real estate situated in the said County of Douglas to wit: Commencing at the South East corner of the North West quarter of Section Fifteen (15) aforesaid and thence running due West nine (9) feet and thence due North fifty (50) feet to a point which is the place of beginning: thence due North seven hundred (700) feet, thence South thirty five degrees East (S  $35^{\circ}$  E) three hundred and sixty six & 19/100 (366 19/100) feet, thence due East three hundred and fifty four (354) feet thence due South four hundred (400) feet and thence due West five hundred and sixty four (564) feet to the place of Beginning.

And also the following described real estate situated in the said County of Douglas to wit: Commencing at the North East corner of the South West quarter of section fifteen (15) aforesaid, thence running due West nine (9) feet and thence due South fifty (50) feet to a point which is the place of beginning, thence due South two thousand five hundred and forty five (2545) feet, thence due East three hundred (300) feet, thence due North two thousand five hundred and forty five (2545) feet and thence due West three hundred (300) feet to the place of Beginning. And;

35.

All that certain property conveyed by Land and River Improvement Company to the Lake Superior Terminal and Transfer Railway Company by Warranty Deed dated May 9, 1888 and recorded on June 19, 1889, in Volume Z of Deeds, at page 449, records of Douglas County, Wisconsin, and being more particularly described as follows:

All that portion of the SE<sup>1</sup> of Section 15 Township 49, Range 14 described as follows: Beginning at the point where the West line of Oakes Avenue intersects the South line of Winter Street thence West along said South line of Winter Street about fifty (50) feet to the East line of the tract of


# 2015 Property Record | Superior/Douglas County, WI

Assessed values not finalized until after Board of Review Property information is valid as of DEC 03 2015 11:41PM

#### OWNER

BNSF

#### CO-OWNER(S)

#### FORMER OWNERS

(2014) UNION OIL CO OF CALIF

PROPERTY INFORMATION	<b>OPERTY INFORMATION</b>
----------------------	---------------------------

AFFECTED D PROPERTY

048040103300

Parcel ID:

Alternate ID:

School Districts:

SUPERIOR SCHOOL DIST

Other Districts:

DOUGLAS COUNTY WITC (VTAE)

Section	<u>Town</u>	<u>Range</u>	<b>Qtr Qtr Section</b>	<b>Qtr Section</b>
15	49N	14W		
15	49N	14W		
Lot:				
<u>Block:</u>				
Plat Name:				
NOT AVAILAI	BLE			
<u> Plat History:</u>				
(2015) NOT A	VAILABL	E		

# PROPERTY DESCRIPTION

**ADDRESS** 

4105 LEXINGTON AVE N STE 200

ARDEN HILLS, MN 55126

A PARCEL OF LAND IN NW 1/4 SEC 15,T 49 R14 -SEE 4-1000 -DESC. AS FOLLOWS: LEASED TO PURE OIL CO. BEG. AT THE SE CORNER OF THE G.N. R/W IN SAID NW1/4 SEC 15-49-14 WHICH POINT IS 450' N OF THE E & W 1/4 SEC LINE IN SAID SEC 15 & APPROX. 410' W

JULIE A HEYEN, PORTFOLIO MANAGER, JLL ON BEHALF OF BNSF

#### Property Address:

VACANT

Municipality:

CITY OF SUPERIOR

#### **DEED INFORMATION**

	<u>Volume</u>	Page	<u>1</u>	Document #
	ALUATIO	N		
Valuation D	late:			20051215
<u>Code</u>	<u>Acres</u>	Land Value	Improvements	<u>Total</u>
G2	9.950	142,300	0	142,300
	9.950	142,300	0	142,300
Total Acres	<u>s:</u>			0.000
Assessme	nt Ratio:			1.0031
Mill Rate:			0	.021449832
Fair Marke	t Value:			141 900 00

# **TAX INFORMATION FOR 2015**

Net Tax Before Credits:			3,052.32
Lottery Credit:			.00
First Dollar Credit:			.00
Net Tax After:			3,052.32
	Amt. Due	Amt. Paid	<u>Balance</u>
Tax	3,052.32	.00	3,052.32
Special Assmnt	.00	.00	.00
Special Chrg	.00	.00	.00
Delinquent Chrg	.00	.00	.00
Private Forest	.00	.00	.00
Woodland Tax	.00	.00	.00
Managed Forest	.00	.00	.00
Prop. Tax Interest		.00	.00
Spec. Tax Interest		.00	.00
Prop. Tax Penalty		.00	.00
Spec. Tax Penalty		.00	.00
Other Charges	.00	.00	.00

# INSTALLMENTS

Period	End Date	<u>Amount</u>
1	01/31/16	1,526.16
2	07/31/16	1,526.16

TC Over-Pay	DTAL ment	3,052.32	.00 .00	) 3	3,052.32	AFFECTED D PROPERTY			
PAYMENT	HISTORY	(POSTED P	AYMENT	S)					
Date	<u>Receipt #</u>	<u>Source</u>	<u>Type</u>	<u>Amount</u>	Tax Status	Assess. S	Status Interest	Penalty	<u>Total</u>



# 2015 Property Record | Superior/Douglas County, WI

Assessed values not finalized until after Board of Review Property information is valid as of DEC 03 2015 11:41PM

# OWNER

BURLINGTON NORTHERN RR ETAL

#### CO-OWNER(S)

#### FORMER OWNERS

(	AFFECTED

Α

PROPERTY

048040097700

# PROPERTY INFORMATION

Parcel ID:

Alternate ID:

School Districts:

SUPERIOR SCHOOL DIST

#### Other Districts:

DOUGLAS COUNTY WITC (VTAE)

Section	<u>Town</u>	<u>Range</u>	<b><u>Qtr Qtr Section</u></b>	<b>Qtr Section</b>
15	49N	14W		
15	49N	14W		
Lot:				
Block:				
Plat Name:				
NOT AVAILA	BLE			
Plat History:				

(2015) NOT AVAILABLE

# **TAX INFORMATION FOR 2015**

Net Tax Before Credits:			1,812.51
Lottery Credit:			.00
First Dollar Credit:			.00
Net Tax After:			1,812.51
	Amt. Due	Amt. Paid	Balance
Tax	1,812.51	.00	1,812.51
Special Assmnt	.00	.00	.00
Special Chrg	.00	.00	.00
Delinquent Chrg	.00	.00	.00
Private Forest	.00	.00	.00
Woodland Tax	.00	.00	.00
Managed Forest	.00	.00	.00
Prop. Tax Interest		.00	.00
Spec. Tax Interest		.00	.00
Prop. Tax Penalty		.00	.00
Spec. Tax Penalty		.00	.00
Other Charges	.00	.00	.00
TOTAL	1,812.51	.00	1,812.51
Over-Payment		.00	

# ADDRESS

BURLINGTON NORTHERN RR ETAL PO BOX 961089 FORT WORTH, TX 76161

# **PROPERTY DESCRIPTION**

A STRIP OF LAND 100' WIDE EXTENDING FROM N LINE OF NW 1/4 OF 15-49-14 DUE S 2239 FT, THE NE CORNER OF SAID STRIP BEING 139' W FROM THE NE CORNER OF SAID 1/4 SEC. 5.12 ACRES 557-241 Property Address: VACANT CITY OF SUPERIOR Municipality: **DEED INFORMATION** Document # Volume Page 557-241 LAND VALUATION Valuation Date: 20051215 <u>Code</u> Acres Land Value **Improvements** Total G2 84,500 5.120 84,500 0 5.120 84,500 84,500 0 Total Acres: 0.000

# Total Acres:0.000Assessment Ratio:1.0031Mill Rate:0.021449832Fair Market Value:84,200.00

INSTALLMENTS		
Period	End Date	<u>Amount</u>
1	01/31/16	906.26
2	07/31/16	906.25

PAYMENT H	IISTORY (PO	OSTED P	AYMENT	S)	AFFECTED A PROPERTY				
Date	Receipt #	<u>Source</u>	Type	<u>Amount</u>	Tax Status	Assess. Status	Interest	<u>Penalty</u>	<u>Total</u>



# 2015 Property Record | Superior/Douglas County, WI

Assessed values not finalized until after Board of Review Property information is valid as of JUL 15 2015 07:13PM

# OWNER

BURLINGTON NORTHERN, INC

#### CO-OWNER(S)

#### FORMER OWNERS

PROPERTY INFORMATION	AFFECTED C PROPERTY	DISTANT WITH A L CENTER
Parcel ID:	04-804-01036-00	VACANT
Alternate ID:		Municipal
School Districts:		Manopa
SUPERIOR SCHOOL DIST		
Other Districts:		DEED I
DOUGLAS COUNTY WITC (VTAE)		
<u>Section Town Range</u>	<u>Qtr Qtr Section</u> <u>Qtr Section</u>	
15 49N 14W		
Lot:		LAND
Block:		Valuation
Plat Name:		<u>Code</u>
NOT AVAILABLE		G3
Plat History:		
(2015) NOT AVAILABLE		Total Acre

# **TAX INFORMATION FOR 2015**

Net Tax Before Credits:	.00
Lottery Credit:	.00
First Dollar Credit:	.00
Net Tax After:	.00

	<u>Amt. Due</u>	<u>Amt. Paid</u>	<u>Balance</u>
Tax	.00	.00	.00
Special Assmnt	.00	.00	.00
Special Chrg	.00	.00	.00
Delinquent Chrg	.00	.00	.00
Private Forest	.00	.00	.00
Woodland Tax	.00	.00	.00
Managed Forest	.00	.00	.00
Prop. Tax Interest		.00	.00
Spec. Tax Interest		.00	.00
Prop. Tax Penalty		.00	.00
Spec. Tax Penalty		.00	.00
Other Charges	.00	.00	.00
TOTAL	.00	.00	.00
Over-Payment		.00	

#### **ADDRESS**

BURLINGTON NORTHERN, INC 2780 WATERFRONT PARKWAY E DRIVE STE 200 INDIANAPOLIS, IN 46214

# **PROPERTY DESCRIPTION**

THAT PART OF THE NW 1/4 OF SEC. 15-49-14 DESC. AS FOLLOWS: BEG AT THE INTER- SECTION OF A LINE PARALLEL WITH & ANT 1865 FT N'LY FROM THE E & W 1/4 LINE OF SAID SEC 15 H A LINE PARALLEL WITH & DISTANT 15 FT W'LY FROM THE ITER LINE OF

#### erty Address:

icipality:

CITY OF SUPERIOR

#### ED INFORMATION

	<u>Volume</u>	Page	Doci	ument #		
LAND VALUATION						
Valuation Date: 2014				0141104		
<u>Code</u>	<u>Acres</u>	Land Value	Improvements	<u>Total</u>		
<mark>G3</mark>	4.300	0	0	0		
	4.300	0	0	0		
Total Acres	<u>.:</u>			0.000		
Assessmer	nt Ratio:			.0000		
<u>Mill Rate:</u> 0.00000000				000000		
Fair Market	t Value:			0.00		

INSTALLMENTS					
Period	End Date	Amount			

<u>Date</u>	Receipt #	<u>Source</u>	<u>Type</u>	<u>Amount</u>	Tax Status	Assess. Status	Interest	Penalty	<u>Total</u>
				_					



# CHEVRON ENVIRONMENTAL MANAGEMENT CO. FORMER UNOCAL TERMINAL SUPERIOR, WISCONSIN BRRTS No.: 03-16-000145

To the best of my knowledge, I hereby state that the legal descriptions for parcels comprising the former Unocal Terminal release site in Superior as stated in the deeds dated February 5, 1891, and September 30, 1993, and included with this GIS Registry submittal are complete and accurate for all the properties associated with this release site that has soil and groundwater contamination that exceeded NR 720 Residual Contaminant Levels and NR 140 Enforcement Standards at the time that closure was requested.

JOHN K. FRARY

Printed Name

PROJECT MANAGER

Title

hng

Signature

December 21, 2015

Date